6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2016-0243; FRL-]

RIN 2060-AO66

National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products Residual Risk and Technology Review

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is proposing amendments to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Plywood and Composite Wood Products (PCWP) to address the results of the residual risk and technology review (RTR) that the EPA is required to conduct under the Clean Air Act (CAA). The EPA is proposing to find that risks due to emissions of air toxics are acceptable from the PCWP source category and that the current NESHAP provides an ample margin of safety to protect public health. Under the technology review, we are proposing to find that there no new developments in practices, processes or control technologies that necessitate revision of the standards. The EPA is proposing to amend provisions addressing periods of startup, shutdown and malfunction (SSM); add provisions regarding electronic reporting; add repeat emissions testing requirements; and make technical and editorial changes. The EPA is proposing these amendments to improve the effectiveness of the NESHAP. While the proposed amendments would not result in reductions in

emissions of hazardous air pollutants (HAP), this action, if finalized, would result in improved monitoring, compliance, and implementation of the rule.

DATES: *Comments*. Comments must be received on or before **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Under the Paperwork Reduction Act (PRA), comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

Public hearing. If anyone contacts us requesting a public hearing on or before **[INSERT DATE 5 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, the EPA will hold a hearing. Additional information about the hearing, if requested, will be published in a subsequent **Federal Register** document and posted at *https://www.epa.gov/stationary-sources-air-pollution/plywood-and-composite-wood-products-manufacture-national-emission*. See **SUPPLEMENTARY INFORMATION** for information on requesting and registering for a public hearing.

ADDRESSES: You may send comments, identified by Docket ID No. EPA-HQ-OAR-2016-0243, by any of the following methods:

- Federal eRulemaking Portal: *https://www.regulations.gov/* (our preferred method). Follow the online instructions for submitting comments.
- Email: *a-and-r-docket@epa.gov*. Include Docket ID No. EPA-HQ-OAR-2016-0243 in the subject line of the message.
- Fax: (202) 566-9744. Attention Docket ID No. EPA-HQ-OAR-2016-0243.

- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Environmental Protection Agency Docket ID No. EPA-HQ-OAR-2016-0243, Mail Code 28221T, 1200 Pennsylvania Avenue, NW, Washington, DC 20460.
- Hand/Courier Delivery: EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, DC 20004. The Docket Center's hours of operation are 8:30 a.m. – 4:30 p.m., Monday – Friday (except federal holidays).

Instructions: All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to *https://www.regulations.gov/*, including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: For questions about this proposed action, contact Ms. Katie Hanks, Sector Policies and Programs Division (E143-03), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-2159; fax number: (919) 541-0516; and email address: *hanks.katie@epa.gov*. For specific information regarding the risk modeling methodology, contact Mr. James Hirtz, Health and Environmental Impacts Division (C539-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-0881; fax number: (919) 541-0840; and email address: *hirtz.james@epa.gov*. For questions about monitoring and testing requirements, contact Mr. Kevin McGinn, Sector Policies and Programs Division (D230-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-3796; fax number: (919)

541-4991; and email address: m*cginn.kevin@epa.gov*. For information about the applicability of the NESHAP to a particular entity, contact Mr. John Cox, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, WJC South Building (Mail Code 2221A), 1200 Pennsylvania Avenue, NW, Washington DC 20460; telephone number: (202) 564-1395; and email address: *cox.john@epa.gov*.

SUPPLEMENTARY INFORMATION:

Public hearing. Please contact Ms. Virginia Hunt at (919) 541-0832 or by email at *hunt.virginia@epa.gov* to request a public hearing, to register to speak at the public hearing, or to inquire as to whether a public hearing will be held.

Docket. The EPA has established a docket for this rulemaking under Docket ID No. EPA-HQ-OAR-2016-0243. All documents in the docket are listed in Regulations.gov. Although listed, some information is not publicly available, *e.g.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy. Publicly available docket materials are available either electronically in Regulations.gov or in hard copy at the EPA Docket Center, Room 3334, WJC West Building, 1301 Constitution Avenue, NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

Instructions. Direct your comments to Docket ID No. EPA-HQ-OAR-2016-0243. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *https://www.regulations.gov/*, including any personal

information provided, unless the comment includes information claimed to be CBI or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *https://www.regulations.gov/* or email. This type of information should be submitted by mail as discussed below.

The EPA may publish any comment received to its public docket. Multimedia submissions (audio, video, *etc.*) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the Web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *https://www.epa.gov/dockets/commenting-epa-dockets*.

The *https://www.regulations.gov/* website allows you to submit your comment anonymously, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through *https://www.regulations.gov/*, your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any digital storage media you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should not include special characters or any form of encryption and be

free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at *https://www.epa.gov/dockets*.

Submitting CBI. Do not submit information containing CBI to the EPA through *https://www.regulations.gov/* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information on any digital storage media that you mail to the EPA, mark the outside of the digital storage media as CBI and then identify electronically within the digital storage media the specific information that is claimed as CBI. In addition to one complete version of the comments that includes information claimed as CBI, you must submit a copy of the comments that does not contain the information claimed as CBI directly to the public docket through the procedures outlined in *Instructions* above. If you submit any digital storage media that does not contain CBI, mark the outside of the digital storage media clearly that it does not contain CBI. Information not marked as CBI will be included in the public docket and the EPA's electronic public docket without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 Code of Federal Regulations (CFR) part 2. Send or deliver information identified as CBI only to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Attention Docket ID No. EPA-HQ-OAR-2016-0243.

Preamble acronyms and abbreviations. The EPA uses multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

AEGL	acute exposure guideline level
AERMOD	air dispersion model used by the HEM-3 model
ATCM	Airborne Toxic Control Measure
ATSDR	Agency for Toxic Substances and Disease Registry
CAA	Clean Air Act

CalEPA	California EPA
CARB	California Air Resources Board
CBI	Confidential Business Information
CDX	Central Data Exchange
CEDRI	Compliance and Emissions Data Reporting Interface
CFR	Code of Federal Regulations
CMS	continuous monitoring systems
EAV	equivalent annualized value
EPA	Environmental Protection Agency
ERPG	Emergency Response Planning Guideline
ERT	Electronic Reporting Tool
GACT	generally available control technology
HAP	hazardous air pollutant(s)
HCl	hydrochloric acid
HEM-3	Human Exposure Model-3
HF	hydrogen fluoride
HI	hazard index
HQ	hazard quotient
ICR	information collection request
IRIS	Integrated Risk Information System
km	kilometer
MACT	maximum achievable control technology
MDF	medium density fiberboard
mg/m^3	milligrams per cubic meter
MIR	maximum individual risk
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NEI	National Emissions Inventory
NESHAP	national emission standards for hazardous air pollutants
NIST	National Institute of Standards and Technology
NRDC	Natural Resources Defense Council
NSPS	new source performance standards
NTTAA	National Technology Transfer and Advancement Act
OAQPS	Office of Air Quality Planning and Standards
OMB	Office of Management and Budget
OSB	oriented Strandboard
OSHA	Occupational Safety and Health Administration
PBCO	production-based compliance option

PB-HAP	hazardous air pollutants known to be persistent and bio-accumulative in the environment
PCWP	plywood and composite wood products
PDF	portable document format
POM	polycyclic organic matter
ppm	parts per million
PRA	Paperwork Reduction Act
PV	present value
RATA	relative accuracy test audit
RCO	regenerative catalytic oxidizer
REL	reference exposure level
RFA	Regulatory Flexibility Act
RfC	reference concentration
RfD	reference dose
RTO	regenerative thermal oxidizer
RTR	residual risk and technology review
SAB	Science Advisory Board
SSM	startup, shutdown, and malfunction
TOSHI	target organ-specific hazard index
tpy	tons per year
TRIM.FaTE	Total Risk Integrated Methodology. Fate, Transport, and Ecological Exposure model
TSCA	Toxic Substances Control Act
UF	uncertainty factor
$\mu g/m^3$	microgram per cubic meter
UMRA	Unfunded Mandates Reform Act
URE	unit risk estimate
USGS	U.S. Geological Survey
VCS	voluntary consensus standards

Organization of this document. The information in this preamble is organized as follows:

I. General Information

A. Does this action apply to me?

Table 1 of this preamble lists the NESHAP and associated regulated industrial source category that is the subject of this proposal. Table 1 is not intended to be exhaustive, but rather provides a guide for readers regarding the entities that this proposed action is likely to affect. The

proposed standards, once promulgated, will be directly applicable to the affected sources. Federal, state, local, and tribal government entities would not be affected by this proposed action. As defined in the *Initial List of Categories of Sources Under Section 112(c)(1) of the Clean Air Act Amendments of 1990* (see 57 FR 31576, July 16, 1992) and *Documentation for Developing the Initial Source Category List, Final Report* (*see* EPA-450/3-91-030, July 1992), the Plywood and Particleboard source category is any facility engaged in the manufacturing of plywood and/or particle boards. This category includes, but is not limited to, manufacturing of chip waferboard, strandboard, waferboard, hardboard/cellulosic fiber board, oriented strandboard (OSB), hardboard plywood, medium density fiberboard (MDF), particleboard, softwood plywood, or other processes using wood and binder systems. The name of the source category was changed to Plywood and Composite Wood Products (PCWP) on November 18, 1999 (64 FR 63025), to more accurately reflect the types of manufacturing facilities covered by the source category. In addition, when the EPA proposed the PCWP rule on January 9, 2003 (68 FR 1276), the scope of the source category was broadened to include lumber kilns located at stand-alone kiln-dried lumber manufacturing facilities or at any other type of facility.

Table 1. NESHAP and Industrial Source Categories Affected By This Proposed Action

Source Category	NESHAP	NAICS Code[1]
Plywood and Composite Wood Products	National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products	321999, 321211, 321212, 321219, 321213

[1] North American Industry Classification System.

B. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this action is available on the Internet. Following signature by the EPA Administrator, the EPA will post a copy of this

proposed action at *https://www.epa.gov/plywood-and-composite-wood-products-manufacture-national-emission*. Following publication in the **Federal Register**, the EPA will post the **Federal Register** version of the proposal and key technical documents at this same website. Information on the overall RTR program is available at *https://www3.epa.gov/ttn/atw/rrisk/rtrpg.html*.

A redline version of the regulatory language that incorporates the proposed changes in this action is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2016-0243).

II. Background

A. What is the statutory authority for this action?

The statutory authority for this action is provided by sections 112 and 301 of the CAA, as amended (42 U.S.C. 7401 *et seq*.). Section 112 of the CAA establishes a two-stage regulatory process to develop standards for emissions of HAP from stationary sources. Generally, the first stage involves establishing technology-based standards and the second stage involves evaluating those standards that are based on maximum achievable control technology (MACT) to determine whether additional standards are needed to address any remaining risk associated with HAP emissions. This second stage is commonly referred to as the "residual risk review." In addition to the residual risk review, the CAA also requires the EPA to review standards set under CAA section 112 every 8 years to determine if there are "developments in practices, processes, or control technologies" that may be appropriate to incorporate into the standards. This review is commonly referred to as the "technology review." When the two reviews are combined into a single rulemaking, it is commonly referred to as the "risk and technology review." The discussion that follows identifies the most relevant statutory sections and briefly explains the contours of the methodology used to implement these statutory requirements. A more

comprehensive discussion appears in the document titled *CAA Section 112 Risk and Technology Reviews: Statutory Authority and Methodology,* in the docket for this rulemaking.

In the first stage of the CAA section 112 standard setting process, the EPA promulgates technology-based standards under CAA section 112(d) for categories of sources identified as emitting one or more of the HAP listed in CAA section 112(b). Sources of HAP emissions are either major sources or area sources, and CAA section 112 establishes different requirements for major source standards and area source standards. "Major sources" are those that emit or have the potential to emit 10 tons per year (tpy) or more of a single HAP or 25 tpy or more of any combination of HAP. All other sources are "area sources." For major sources, CAA section 112(d)(2) provides that the technology-based NESHAP must reflect the maximum degree of emission reductions of HAP achievable (after considering cost, energy requirements, and non-air quality health and environmental impacts). These standards are commonly referred to as MACT standards. CAA section 112(d)(3) also establishes a minimum control level for MACT standards, known as the MACT "floor." The EPA must also consider control options that are more stringent than the floor. Standards more stringent than the floor are commonly referred to as beyond-the-floor standards. In certain instances, as provided in CAA section 112(h), the EPA may set work practice standards where it is not feasible to prescribe or enforce a numerical emission standard. For area sources, CAA section 112(d)(5) gives the EPA discretion to set standards based on generally available control technologies or management practices (GACT standards) in lieu of MACT standards.

The second stage in standard-setting focuses on identifying and addressing any remaining (*i.e.,* "residual") risk according to CAA section 112(f). For source categories subject to MACT standards, section 112(f)(2) of the CAA requires the EPA to determine whether promulgation of

additional standards is needed to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect. Section 112(d)(5) of the CAA provides that this residual risk review is not required for categories of area sources subject to GACT standards. Section 112(f)(2)(B) of the CAA further expressly preserves the EPA's use of the two-step approach for developing standards to address any residual risk and the Agency's interpretation of "ample margin of safety" developed in the *National Emissions Standards for Hazardous Air Pollutants: Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, Benzene Storage Vessels, Benzene Equipment Leaks, and Coke By-Product Recovery Plants* (Benzene NESHAP) (54 FR 38044, September 14, 1989). The EPA notified Congress in the Risk Report that the Agency intended to use the Benzene NESHAP approach in making CAA section 112(f) residual risk determinations (EPA–453/R–99–001, p. ES–11). The EPA subsequently adopted this approach in its residual risk determinations and the United States Court of Appeals for the District of Columbia Circuit (the Court) upheld the EPA's interpretation that CAA section 112(f)(2) incorporates the approach established in the Benzene NESHAP. See *NRDC v. EPA*, 529 F.3d 1077, 1083 (D.C. Cir. 2008).

The approach incorporated into the CAA and used by the EPA to evaluate residual risk and to develop standards under CAA section 112(f)(2) is a two-step approach. In the first step, the EPA determines whether risks are acceptable. This determination "considers all health information, including risk estimation uncertainty, and includes a presumptive limit on maximum individual lifetime [cancer] risk (MIR)[1] of approximately 1 in 10 thousand." 54 FR 38045, September 14, 1989. If risks are unacceptable, the EPA must determine the emissions

[1] Although defined as "maximum individual risk," MIR refers only to cancer risk. MIR, one metric for assessing cancer risk, is the estimated risk if an individual were exposed to the maximum level of a pollutant for a lifetime.

standards necessary to reduce risk to an acceptable level without considering costs. In the second step of the approach, the EPA considers whether the emissions standards provide an ample margin of safety to protect public health "in consideration of all health information, including the number of persons at risk levels higher than approximately 1 in 1 million, as well as other relevant factors, including costs and economic impacts, technological feasibility, and other factors relevant to each particular decision." *Id.* The EPA must promulgate emission standards necessary to provide an ample margin of safety to protect public health or determine that the standards being reviewed provide an ample margin of safety without any revisions. After conducting the ample margin of safety analysis, the EPA considers whether a more stringent standard is necessary to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect.

CAA section 112(d)(6) separately requires the EPA to review standards promulgated under CAA section 112 and revise them "as necessary (taking into account developments in practices, processes, and control technologies)" no less often than every 8 years. In conducting this review, which the EPA calls the "technology review," the EPA is not required to recalculate the MACT floor. *Natural Resources Defense Council (NRDC) v. EPA*, 529 F.3d 1077, 1084 (D.C. Cir. 2008). *Association of Battery Recyclers, Inc. v. EPA*, 716 F.3d 667 (D.C. Cir. 2013). The EPA may consider cost in deciding whether to revise the standards pursuant to CAA section 112(d)(6).

B. What is this source category and how does the current NESHAP regulate its HAP emissions?

Plywood and composite wood products are manufactured by bonding wood material (fibers, particles, strands, *etc.*) or agricultural fiber, generally with resin under heat and pressure, to form a structural panel or engineered wood product. Plywood and composite wood products

manufacturing facilities also include facilities that manufacture dry veneer and lumber kilns located at any facility. Plywood and composite wood products include (but are not limited to) plywood, veneer, particleboard, OSB, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams.

This proposal includes both a residual risk assessment and a technology review of the standards applicable to emission sources subject to the PCWP NESHAP. The NESHAP contains several compliance options for process units subject to the standards: (1) installation and use of emissions control systems with an efficiency of at least 90 percent; (2) production-based limits that restrict HAP emissions per unit of product produced; and (3) emissions averaging that allows control of emissions from a group of sources collectively (at existing affected sources). These compliance options apply for the following process units: fiberboard mat dryer heated zones (at new affected sources); green rotary dryers; hardboard ovens; press predryers (at new affected sources); pressurized refiners; primary tube dryers; secondary tube dryers; reconstituted wood product board coolers (at new affected sources); reconstituted wood product presses; softwood veneer dryer heated zones; rotary strand dryers; and conveyor strand dryers (zone one at existing affected sources, and zones one and two at new affected sources). In addition, the PCWP NESHAP includes work practice standards for dry rotary dryers, hardwood veneer dryers, softwood veneer dryers, veneer redryers, and group 1 miscellaneous coating operations (defined in 40 CFR 63.2292).

In 2007, the D.C. Circuit remanded and vacated portions of the 2004 NESHAP promulgated by the EPA to establish MACT standards for the PCWP source category. *NRDC v. EPA*, 489 F.3d 1364 (D.C. Cir. 2007). The EPA will address the partial remand and vacatur of

the 2004 rule in a future action. The EPA is not addressing the partial remand and vacatur in this RTR. The Court vacated and remanded portions of the 2004 rule based on certain aspects of the MACT determinations made by the EPA. In the 2004 rule, the EPA had concluded that the MACT standards for several process units were represented by no emission reduction (or "no control" emission floors). The "no control" MACT conclusions were rejected because, as the Court clarified, in a related decision, the EPA must establish emission standards for listed HAP. 489 F.3d 1364, 1371, citing *Sierra Club v. EPA*, 479 F.3d 875 (D.C. Cir. 2007).

To address the remand, the EPA plans to develop emission standards for the relevant process units in a separate action subsequent to this proposed RTR action for the source category. As noted below, the EPA conducted an information collection prior to beginning the RTR process which supplemented the available HAP emission inventory for the category. The EPA will evaluate the data collected and any additional information submitted before initiating the rulemaking to address the remand.

C. What data collection activities were conducted to support this action?

On October 5, 2017, the EPA issued an Information Collection Request (ICR) to gather information from PCWP manufacturers to support conducting the PCWP NESHAP RTR. The ICR gathered detailed process data, emission release point characteristics, and HAP emissions data for PCWP process units located at major sources. The response rate for the ICR was over 99 percent. For more details on the data collection conducted to prepare inputs for the residual risk assessment, see the memorandum titled *Preparation of the Residual Risk Modeling Inputs File for the PCWP NESHAP* in the docket for this rulemaking. For more details on the data collection conducted for the technology review, see the memoranda titled *Technology Review for the Plywood and Composite Wood Products NESHAP* and *Compilation of the Plywood and*

Composite Wood Products (PCWP) Information Collection Request (ICR) Responses into an ICR-Response Data Base, also available in the docket.

D. What other relevant background information and data are available?

In addition to ICR data spreadsheets provided by respondents, the EPA reviewed other information sources to determine if there have been developments in practices, processes, or control technologies by PCWP facilities to support the technology review of the NESHAP. These information sources include:

- Emissions data (*e.g.*, stack test reports, emissions calculations) submitted with survey responses;
- Facility operating permits submitted with survey responses or obtained from state agencies;
- Semiannual compliance reports submitted with survey responses;
- Other documentation submitted with survey responses (*e.g.*, compliance calculations; process flow diagrams);
- Information and data analyses submitted by industry organizations;
- Information obtained during site visits and meetings with stakeholders;
- Information on air pollution control options in the PCWP industry from the EPA's Reasonably Available Control Technology/Best Available Control Technology/Lowest Achievable Emission Rate Clearinghouse;
- Information on applicability and compliance issues from the EPA's Applicability Determination Index; and
- Literature review of recent information on PCWP practices, processes, and control technologies.

III. Analytical Procedures and Decision-Making

In this section, the EPA describes the analyses performed to support the proposed decisions for the RTR and other issues addressed in this proposal.

A. How do we consider risk in our decision-making?

As discussed in section II.A of this preamble and in the Benzene NESHAP, in evaluating and developing standards under CAA section 112(f)(2), the EPA applies a two-step approach to determine whether or not risks are acceptable and to determine if the standards provide an ample margin of safety to protect public health. As explained in the Benzene NESHAP, "the first step judgment on acceptability cannot be reduced to any single factor" and, thus, "[t]he Administrator believes that the acceptability of risk under section 112 is best judged on the basis of a broad set of health risk measures and information." 54 FR 38046, September 14, 1989. Similarly, with regard to the ample margin of safety determination, "the Agency again considers all of the health risk and other health information considered in the first step. Beyond that information, additional factors relating to the appropriate level of control will also be considered, including cost and economic impacts of controls, technological feasibility, uncertainties, and any other relevant factors." *Id.*

The Benzene NESHAP approach provides flexibility regarding factors the EPA may consider in making determinations and how the EPA may weigh those factors for each source category. The EPA conducts a risk assessment that provides estimates of the MIR posed by the HAP emissions from each source in the source category, the hazard index (HI) for chronic exposures to HAP with the potential to cause noncancer health effects, and the hazard quotient

(HQ) for acute exposures to HAP with the potential to cause noncancer health effects.[2] The assessment also provides estimates of the distribution of cancer risk within the exposed populations, cancer incidence, and an evaluation of the potential for an adverse environmental effect. The scope of the EPA's risk analysis is consistent with the EPA's response to comments on our policy under the Benzene NESHAP where the EPA explained that:

> [t]he policy chosen by the Administrator permits consideration of multiple measures of health risk. Not only can the MIR figure be considered, but also incidence, the presence of non-cancer health effects, and the uncertainties of the risk estimates. In this way, the effect on the most exposed individuals can be reviewed as well as the impact on the general public. These factors can then be weighed in each individual case. This approach complies with the *Vinyl Chloride* mandate that the Administrator ascertain an acceptable level of risk to the public by employing his expertise to assess available data. It also complies with the Congressional intent behind the CAA, which did not exclude the use of any particular measure of public health risk from the EPA's consideration with respect to CAA section 112 regulations, and thereby implicitly permits consideration of any and all measures of health risk which the Administrator, in his judgment, believes are appropriate to determining what will 'protect the public health'.

See 54 FR 38057, September 14, 1989. Thus, the level of the MIR is only one factor to be weighed in determining acceptability of risk. The Benzene NESHAP explained that "an MIR of approximately one in 10 thousand should ordinarily be the upper end of the range of acceptability. As risks increase above this benchmark, they become presumptively less acceptable under CAA section 112, and would be weighed with the other health risk measures and information in making an overall judgment on acceptability. Or, the Agency may find, in a particular case, that a risk that includes an MIR less than the presumptively acceptable level is unacceptable in the light of other health risk factors." *Id.* at 38045. In other words, risks that include an MIR where 100-in-1 million may be determined to be acceptable and risks with an

[2] The MIR is defined as the cancer risk associated with a lifetime of exposure at the highest concentration of HAP where people are likely to live. The HQ is the ratio of the potential HAP exposure concentration to the noncancer dose-response value; the HI is the sum of HQs for HAP that affect the same target organ or organ system.

MIR below that level may be determined to be unacceptable, depending on all of the available information. Similarly, with regard to the ample margin of safety analysis, the EPA stated in the Benzene NESHAP that: "EPA believes the relative weight of the many factors that can be considered in selecting an ample margin of safety can only be determined for each specific source category. This occurs mainly because technological and economic factors (along with the health-related factors) vary from source category to source category." *Id.* at 38061. The EPA also considers the uncertainties associated with the various risk analyses, as discussed earlier in this preamble, in our determinations of acceptability and ample margin of safety.

The EPA notes that we have not considered certain health information to date in making residual risk determinations. At this time, the EPA does not attempt to quantify the HAP risk that may be associated with emissions from other facilities that do not include the source category under review, mobile source emissions, natural source emissions, persistent environmental pollution, or atmospheric transformation in the vicinity of the sources in the category.

The EPA understands the potential importance of considering an individual's total exposure to HAP in addition to considering exposure to HAP emissions from the source category and facility. The EPA recognizes that such consideration may be particularly important when assessing noncancer risk, where pollutant-specific exposure health reference levels (*e.g.*, reference concentrations (RfCs)) are based on the assumption that thresholds exist for adverse health effects. For example, the EPA recognizes that, although exposures attributable to emissions from a source category or facility alone may not indicate the potential for increased risk of adverse noncancer health effects in a population, the exposures resulting from emissions from the facility in combination with emissions from all of the other sources (*e.g.*, other facilities) to which an individual is exposed may be sufficient to result in an increased risk of

adverse noncancer health effects. In May 2010, the Science Advisory Board (SAB) advised the EPA "that RTR assessments will be most useful to decision makers and communities if results are presented in the broader context of aggregate and cumulative risks, including background concentrations and contributions from other sources in the area."[3]

In response to the SAB recommendations, the EPA incorporates cumulative risk analyses into its RTR risk assessments, including those reflected in this proposal. The Agency (1) conducts facility-wide assessments, which include source category emission points, as well as other emission points within the facilities; (2) combines exposures from multiple sources in the same category that could affect the same individuals; and (3) for some persistent and bioaccumulative pollutants, analyzes the ingestion route of exposure. In addition, the RTR risk assessments consider aggregate cancer risk from all carcinogens and aggregated noncancer HQs for all noncarcinogens affecting the same target organ or target organ system.

Although the EPA is interested in placing source category and facility-wide HAP risk in the context of total HAP risk from all sources combined in the vicinity of each source, we are concerned about the uncertainties of doing so. Estimates of total HAP risk from emission sources other than those that the EPA has studied in depth during this RTR review would have significantly greater associated uncertainties than the source category or facility-wide estimates. Such aggregate or cumulative assessments would compound those uncertainties, making the assessments too unreliable.

[3] Recommendations of the SAB Risk and Technology Review Panel are provided in their report, which is available at: *https://yosemite.epa.gov/sab/sabproduct.nsf/4AB3966E263D943A8525771F00668381/$File/EPA-SAB-10-007-unsigned.pdf*.

B. How do we perform the technology review?

Our technology review focuses on the identification and evaluation of developments in practices, processes, and control technologies that have occurred since the MACT standards were promulgated. Where the EPA identifies such developments, we analyze their technical feasibility, estimated costs, energy implications, and non-air environmental impacts. The EPA also considers the emission reductions associated with applying each development. This analysis informs our decision of whether it is "necessary" to revise the emissions standards. In addition, the EPA considers the appropriateness of applying controls to new sources versus retrofitting existing sources. For this exercise, we consider any of the following to be a "development":

- Any add-on control technology or other equipment that was not identified and considered during development of the original MACT standards;
- Any improvements in add-on control technology or other equipment (that were identified and considered during development of the original MACT standards) that could result in additional emissions reduction;
- Any work practice or operational procedure that was not identified or considered during development of the original MACT standards;
- Any process change or pollution prevention alternative that could be broadly applied to the industry and that was not identified or considered during development of the original MACT standards; and
- Any significant changes in the cost (including cost effectiveness) of applying controls (including controls the EPA considered during the development of the original MACT standards).

In addition to reviewing the practices, processes, and control technologies that were considered at the time the EPA originally developed the NESHAP, we review a variety of data sources in our investigation of potential practices, processes, or controls to consider. See sections II.C and II.D of this preamble for information on the specific data sources that were reviewed as part of the technology review.

C. How do we estimate post-MACT risk posed by the source category?

In this section, we provide a complete description of the types of analyses that the EPA generally performs during the risk assessment process. In some cases, the EPA does not perform a specific analysis because it is not relevant. For example, in the absence of emissions of HAP known to be persistent and bioaccumulative in the environment (PB-HAP), the EPA would not perform a multipathway exposure assessment. Where the EPA does not perform an analysis, we state that we do not and provide the reason. While we present all of our risk assessment methods, we only present risk assessment results for the analyses actually conducted (see section IV.A of this preamble).

The EPA conducts a risk assessment that provides estimates of the MIR for cancer posed by the HAP emissions from each source in the source category, the HI for chronic exposures to HAP with the potential to cause noncancer health effects, and the HQ for acute exposures to HAP with the potential to cause noncancer health effects. The assessment also provides estimates of the distribution of cancer risk within the exposed populations, cancer incidence, and an evaluation of the potential for an adverse environmental effect. The seven sections that follow this paragraph describe how the EPA estimated emissions and conducted the risk assessment. The docket for this rulemaking contains the following document which provides more information on the risk assessment inputs and models: *Residual Risk Assessment for the Plywood*

and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule. The methods used to assess risk (as described in the seven primary steps below) are consistent with those described by the EPA in the document reviewed by a panel of the EPA's SAB in 2009;[4] and described in the SAB review report issued in 2010. They are also consistent with the key recommendations contained in that report.

1. How did we estimate actual emissions and identify the emissions release characteristics?

In October 2017, the EPA initiated an ICR to gather information from U.S. PCWP manufacturers to support conducting the PCWP RTR. The ICR response period ended in February 2018. The ICR gathered process data, emission release point characteristics, coordinates, and HAP emissions data for PCWP process units located at major sources of HAP. Assembly and quality assurance of the ICR data needed to construct the residual risk modeling file for the PCWP source category is discussed in *Preparation of Residual Risk Modeling Inputs File for the PCWP NESHAP,* which is available in the docket for this action.

2. How did we estimate MACT-allowable emissions?

The available emissions data in the RTR emissions dataset include estimates of the mass of HAP emitted during a specified annual time period. These "actual" emission levels are often lower than the emission levels allowed under the requirements of the current MACT standards. The emissions allowed under the MACT standards are referred to as the "MACT-allowable" emissions. The EPA discussed the consideration of both MACT-allowable and actual emissions in the final Coke Oven Batteries RTR (70 FR 19998–19999, April 15, 2005) and in the proposed

[4] U.S. EPA. *Risk and Technology Review (RTR) Risk Assessment Methodologies: For Review by the EPA's Science Advisory Board with Case Studies – MACT I Petroleum Refining Sources and Portland Cement Manufacturing*, June 2009. EPA-452/R-09-006. *https://www3.epa.gov/airtoxics/rrisk/rtrpg.html*.

and final Hazardous Organic NESHAP RTR (71 FR 34428, June 14, 2006, and 71 FR 76609, December 21, 2006, respectively). In those actions, the EPA noted that assessing the risk at the MACT-allowable level is inherently reasonable since that risk reflects the maximum level facilities could emit and still comply with national emission standards. The EPA also explained that it is reasonable to consider actual emissions, where such data are available, in both steps of the risk analysis, in accordance with the Benzene NESHAP approach. (54 FR 38044, September 14, 1989.)

The PCWP ICR requested that respondents provide estimates of allowable emissions based on their site-specific circumstances (*e.g.*, control measures in place). Therefore, unlike other RTR projects that develop a multiplier to estimate allowable emissions from actual emissions reported in the National Emissions Inventory (NEI), the directly reported ICR data for allowable emissions were used for the PCWP category.[5]

The allowable emissions estimates provided by the ICR respondents were reviewed for completeness and to ensure they made sense relative to actual emissions. Approximately 95 percent of the allowable emissions estimates provided by respondents were reasonable and were used without revision. The remaining allowable emission estimates were either missing, provided as zero, or otherwise suspect compared to actual emissions. Because nearly all the allowable emissions estimates in need of gap-filling were for process units without PCWP MACT standards requiring use of add-on controls, the gaps and adjustments were completed by setting the MACT-allowable emission rates equal to the actual emission rates.[6]

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[5] Sroka, K., E. Rickman, and C. Moss, RTI, and K. Hanks, U.S. EPA. *Preparation of Residual Risk Modeling Inputs File for the PCWP NESHAP*. Memorandum to the PCWP Docket File. February 7, 2019.
[6] *Id.*

3. How do we conduct dispersion modeling, determine inhalation exposures, and estimate individual and population inhalation risk?

Both long-term and short-term inhalation exposure concentrations and health risk from the source category addressed in this proposal were estimated using the Human Exposure Model (HEM-3).[7] The HEM-3 performs three primary risk assessment activities: (1) conducting dispersion modeling to estimate the concentrations of HAP in ambient air, (2) estimating long-term and short-term inhalation exposures to individuals residing within 50 kilometers (km) of the modeled sources, and (3) estimating individual and population-level inhalation risk using the exposure estimates and quantitative dose-response information.

a. Dispersion Modeling

The air dispersion model AERMOD, used by the HEM-3 model, is one of the EPA's preferred models for assessing air pollutant concentrations from industrial facilities.[8] To perform the dispersion modeling and to develop the preliminary risk estimates, HEM-3 draws on three data libraries. The first is a library of meteorological data, which is used for dispersion calculations. This library includes 1 year (2016) of hourly surface and upper air observations from 824 meteorological stations, selected to provide coverage of the United States and Puerto Rico. A second library of United States Census Bureau census block[9] internal point locations and populations provides the basis of human exposure calculations (U.S. Census, 2010). In addition, for each census block, the census library includes the elevation and controlling hill height, which

[7] For more information about HEM-3, go to *https://www.epa.gov/fera/risk-assessment-and-modeling-human-exposure-model-hem.*

[8] U.S. EPA. Revision to the *Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions* (70 FR 68218, November 9, 2005).

[9] A census block is the smallest geographic area for which census statistics are tabulated.

are also used in dispersion calculations. A third library of pollutant-specific dose-response values is used to estimate health risk. These are discussed below.

b. Risk from Chronic Exposure to HAP

In developing the risk assessment for chronic exposures, the EPA uses the estimated annual average ambient air concentrations of each HAP emitted by each source in the source category. The HAP air concentrations at each nearby census block centroid located within 50 km of the facility are a surrogate for the chronic inhalation exposure concentration for all the people who reside in that census block. A distance of 50 km is consistent with both the analysis supporting the 1989 Benzene NESHAP (54 FR 38044, September 14, 1989) and the limitations of Gaussian dispersion models, including AERMOD.

For each facility, the EPA calculates the MIR as the cancer risk associated with a continuous lifetime (24 hours per day, 7 days per week, 52 weeks per year, 70 years) exposure to the maximum concentration at the centroid of each inhabited census block. The EPA calculates individual cancer risk by multiplying the estimated lifetime exposure to the ambient concentration of each HAP (in micrograms per cubic meter ($\mu g/m^3$)) by its unit risk estimate (URE). The URE is an upper-bound estimate of an individual's incremental risk of contracting cancer over a lifetime of exposure to a concentration of 1 microgram of the pollutant per cubic meter of air. For residual risk assessments, the EPA generally uses UREs from the EPA's Integrated Risk Information System (IRIS). For carcinogenic pollutants without IRIS values, the EPA looks to other reputable sources of cancer dose-response values, often using California EPA (CalEPA) UREs, where available. In cases where new, scientifically credible dose-response values have been developed in a manner consistent with EPA guidelines and have undergone a peer review process similar to that used by the EPA, the EPA may use such dose-response values

in place of, or in addition to, other values, if appropriate. The pollutant-specific dose-response values used to estimate health risk are available at *https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants*.

To estimate individual lifetime cancer risks associated with exposure to HAP emissions from each facility in the source category, the EPA sums the risks for each of the carcinogenic HAP[10] emitted by the modeled facility. The EPA estimates cancer risk at every census block within 50 km of every facility in the source category. The MIR is the highest individual lifetime cancer risk estimated for any of those census blocks. In addition to calculating the MIR, the EPA estimates the distribution of individual cancer risks for the source category by summing the number of individuals within 50 km of the sources whose estimated risk falls within a specified risk range. The EPA also estimates annual cancer incidence by multiplying the estimated lifetime cancer risk at each census block by the number of people residing in that block, summing results for all of the census blocks, and then dividing this result by a 70-year lifetime.

To assess the risk of noncancer health effects from chronic exposure to HAP, the EPA calculates either an HQ or a target organ-specific hazard index (TOSHI). The EPA calculates an

[10] The EPA's 2005 *Guidelines for Carcinogen Risk Assessment* classifies carcinogens as: "carcinogenic to humans," "likely to be carcinogenic to humans," and "suggestive evidence of carcinogenic potential." These classifications also coincide with the terms "known carcinogen, probable carcinogen, and possible carcinogen," respectively, which are the terms advocated in the EPA's *Guidelines for Carcinogen Risk Assessment*, published in 1986 (51 FR 33992, September 24, 1986). In August 2000, the document, *Supplemental Guidance for Conducting Health Risk Assessment of Chemical Mixtures* (EPA/630/R-00/002), was published as a supplement to the 1986 document. Copies of both documents can be obtained from *https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=20533&CFID=70315376&CFTOKEN=71597944*. Summing the risk of these individual compounds to obtain the cumulative cancer risk is an approach that was recommended by the EPA's SAB in their 2002 peer review of the EPA's National Air Toxics Assessment (NATA) titled *NATA - Evaluating the National-scale Air Toxics Assessment 1996 Data -- an SAB Advisory*, available at *https://yosemite.epa.gov/sab/sabproduct.nsf/214C6E915BB04E14852570CA007A682C/$File/ecadv02001.pdf*.

HQ when a single noncancer HAP is emitted. Where more than one noncancer HAP is emitted, the EPA sums the HQ for each of the HAP that affects a common target organ or target organ system to obtain a TOSHI. The HQ is the estimated exposure divided by the chronic noncancer dose-response value, which is a value selected from one of several sources. The preferred chronic noncancer dose-response value is the EPA RfC, defined as "an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime" (*https://iaspub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&vocabName=IRIS%20Glossary*). In cases where an RfC from the EPA's IRIS is not available or where the EPA determines that using a value other than the RfC is appropriate, the chronic noncancer dose-response value can be a value from the following prioritized sources, which define their dose-response values similarly to the EPA: (1) the Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Level (*https://www.atsdr.cdc.gov/mrls/index.asp*); (2) the CalEPA Chronic Reference Exposure Level (REL) (*https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0*); or (3) as noted above, a scientifically credible dose-response value that has been developed in a manner consistent with the EPA guidelines and has undergone a peer review process similar to that used by the EPA. The pollutant-specific dose-response values used to estimate health risks are available at *https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants*.

c. Risk from Acute Exposure to HAP that May Cause Health Effects Other Than Cancer

For each HAP for which appropriate acute inhalation dose-response values are available, the EPA also assesses the potential health risks due to acute exposure. For these assessments, the EPA makes conservative assumptions about emission rates, meteorology, and exposure location. In this proposed rulemaking, as part of the EPA's efforts to continually improve our methodologies to evaluate the risks that HAP emitted from categories of industrial sources pose to human health and the environment,[11] we are revising our treatment of meteorological data to use reasonable worst-case air dispersion conditions in our acute risk screening assessments instead of worst-case air dispersion conditions. This revised treatment of meteorological data and the supporting rationale are described in more detail in *Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* and in Appendix 5 of the report: *Technical Support Document for Acute Risk Screening Assessment*. The EPA will be applying this revision in RTR rulemakings proposed on or after June 3, 2019.

To assess the potential acute risk to the maximally exposed individual, the EPA uses the peak hourly emission rate for each emission point,[12] reasonable worst-case air dispersion conditions (*i.e.*, 99th percentile), and the point of highest off-site exposure. Specifically, the EPA

[11] See, *e.g.*, U.S. EPA. *Screening Methodologies to Support Risk and Technology Reviews (RTR): A Case Study Analysis* (Draft Report, May 2017. *https://www3.epa.gov/ttn/atw/rrisk/rtrpg.html*).

[12] In the absence of hourly emission data, the EPA develops estimates of maximum hourly emission rates by multiplying the average actual annual emissions rates by a factor (either a category-specific factor or a default factor of 10) to account for variability. This is documented in *Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* and in Appendix 5 of the report: *Technical Support Document for Acute Risk Screening Assessment*. Both are available in the docket for this rulemaking.

assumes that peak emissions from the source category and reasonable worst-case air dispersion conditions co-occur and that a person is present at the point of maximum exposure.

To characterize the potential health risks associated with estimated acute inhalation exposures to a HAP, the EPA generally uses multiple acute dose-response values, including acute RELs, acute exposure guideline levels (AEGLs), and emergency response planning guidelines (ERPG) for 1-hour exposure durations, if available, to calculate acute HQs. The acute HQ is calculated by dividing the estimated acute exposure concentration by the acute dose-response value. For each HAP for which acute dose-response values are available, the EPA calculates acute HQs.

An acute REL is defined as "the concentration level at or below which no adverse health effects are anticipated for a specified exposure duration."[13] Acute RELs are based on the most sensitive, relevant, adverse health effect reported in the peer-reviewed medical and toxicological literature. They are designed to protect the most sensitive individuals in the population through the inclusion of margins of safety. Because margins of safety are incorporated to address data gaps and uncertainties, exceeding the REL does not automatically indicate an adverse health impact. AEGLs represent threshold exposure limits for the general public and are applicable to emergency exposures ranging from 10 minutes to 8 hours.[14] They are guideline levels for "once-

[13] CalEPA issues acute RELs as part of its Air Toxics Hot Spots Program, and the 1-hour and 8-hour values are documented in *Air Toxics Hot Spots Program Risk Assessment Guidelines, Part I, The Determination of Acute Reference Exposure Levels for Airborne Toxicants*, which is available at *https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary*.

[14] National Academy of Sciences, 2001. *Standing Operating Procedures for Developing Acute Exposure Levels for Hazardous Chemicals*, page 2. Available at *https://www.epa.gov/sites/production/files/2015-09/documents/sop_final_standing_operating_procedures_2001.pdf*. Note that the National Advisory Committee for Acute Exposure Guideline Levels for Hazardous Substances ended in

in-a-lifetime, short-term exposures to airborne concentrations of acutely toxic, high-priority chemicals." *Id.* at 21. The AEGL–1 is specifically defined as "the airborne concentration (expressed as ppm (parts per million) or mg/m^3 (milligrams per cubic meter)) of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure." The document also notes that "Airborne concentrations below AEGL–1 represent exposure levels that can produce mild and progressively increasing but transient and nondisabling odor, taste, and sensory irritation or certain asymptomatic, nonsensory effects." *Id.* AEGL–2 are defined as "the airborne concentration (expressed as parts per million or milligrams per cubic meter) of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape." *Id.*

ERPGs are "developed for emergency planning and are intended as health-based guideline concentrations for single exposures to chemicals."[15] *Id.* at 1. The ERPG–1 is defined as "the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing other than mild transient adverse health effects or without perceiving a clearly defined, objectionable odor." *Id.* at 2. Similarly, the ERPG–2 is defined as "the maximum airborne concentration below which it is believed that nearly all

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October 2011, but the AEGL program continues to operate at the EPA and works with the National Academies to publish final AEGLs (*https://www.epa.gov/aegl*).

[15] *ERPGS Procedures and Responsibilities*. March 2014. American Industrial Hygiene Association. Available at: *https://www.aiha.org/get-involved/AIHAGuidelineFoundation/EmergencyResponsePlanningGuidelines/Documents/ERPG%20Committee%20Standard%20Operating%20Procedures%20%20-%20March%202014%20Revision%20%28Updated%2010-2-2014%29.pdf.*

individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action." *Id.* at 1.

An acute REL for 1-hour exposure durations is typically lower than its corresponding AEGL–1 and ERPG–1. Even though their definitions are slightly different, AEGL–1s are often the same as the corresponding ERPG–1s, and AEGL–2s are often equal to ERPG–2s. The maximum HQs from the EPA's acute inhalation screening risk assessment typically result when we use the acute REL for a HAP. In cases where the maximum acute HQ exceeds 1, the EPA also reports the HQ based on the next highest acute dose-response value (usually the AEGL–1 and/or the ERPG–1).

For this source category, estimates of short-term (maximum hourly) emissions were submitted by PCWP ICR respondents. In our review of the ICR data, the EPA compared the short-term emission estimates to annual emissions estimates to ensure the short-term emission estimates were reasonable. The EPA gap-filled short-term emission estimates that were missing or found to be invalid with short-term emission estimates calculated using a PCWP emission process-specific acute multiplier. The acute multiplier, which is a factor multiplied by annual emissions to estimate maximum hourly emissions, was derived from the ICR data for each emissions process group. The acute factors used to gap-fill missing or invalid short-term emission estimates in the PCWP ICR inventory ranged from 1.2 to 10. Further discussion of the process-specific factors chosen to fill gaps in the ICR data can be found in the memorandum, *Preparation of Residual Risk Modeling Inputs File for the PCWP NESHAP*, available in the docket for this rulemaking.

In the EPA's acute inhalation screening risk assessment, acute impacts are deemed negligible for HAP for which acute HQs are less than or equal to 1, and no further analysis is performed for these HAP. In cases where an acute HQ from the screening step is greater than 1, the EPA assesses the site-specific data to ensure that the acute HQ is at an off-site location. For this source category, the data refinements employed consisted of evaluating residential properties outside the facility boundaries to estimate acute impacts that exceeded an HQ screen of 1. These refinements are discussed more fully in the *Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this source category.

4. How do we conduct the multipathway exposure and risk screening assessment?

The EPA conducts a tiered screening assessment examining the potential for significant human health risks due to exposures via routes other than inhalation (*i.e.*, ingestion). We first determine whether any sources in the source category emit any HAP known to be persistent and bioaccumulative in the environment, as identified in the EPA's Air Toxics Risk Assessment Library (See Volume 1, Appendix D, at *https://www.epa.gov/fera/risk-assessment-and-modeling-air-toxics-risk-assessment-reference-library*).

For the PCWP source category, we identified PB-HAP emissions of arsenic, polychlorinated dibenzodioxins and furans (dioxins/furans), polycyclic organic matter (POM), cadmium, mercury, and lead, so we proceeded to the next step of the evaluation. Except for lead, the human health risk screening assessment for PB-HAP consists of three progressive tiers. In a Tier 1 screening assessment, we determine whether the magnitude of the facility-specific emissions of PB-HAP warrants further evaluation to characterize human health risk through ingestion exposure. To facilitate this step, we evaluate emissions against previously developed

screening threshold emission rates for several PB-HAP that are based on a hypothetical upper-end screening exposure scenario developed for use in conjunction with the EPA's Total Risk Integrated Methodology.Fate, Transport, and Ecological Exposure (TRIM.FaTE) model. The PB-HAP with screening threshold emission rates are arsenic compounds, cadmium compounds, dioxins/furans, mercury compounds, and POM. Based on the EPA estimates of toxicity and bioaccumulation potential, these pollutants represent a conservative list for inclusion in multipathway risk assessments for RTR rules. (See Volume 1, Appendix D at *https://www.epa.gov/sites/production/files/2013-08/documents/volume_1_reflibrary.pdf*). In this assessment, we compare the facility-specific emission rates of these PB-HAP to the screening threshold emission rates for each PB-HAP to assess the potential for significant human health risks via the ingestion pathway. We call this application of the TRIM.FaTE model the Tier 1 screening assessment. The ratio of a facility's actual emission rate to the Tier 1 screening threshold emission rate is a "screening value."

We derive the Tier 1 screening threshold emission rates for these PB-HAP (other than lead compounds) to correspond to a maximum excess lifetime cancer risk of 1-in-1 million (*i.e.*, for arsenic compounds, dioxins/furans, and POM) or, for HAP that cause noncancer health effects (*i.e.*, cadmium compounds and mercury compounds), a maximum HQ of 1. If the emission rate of any one PB-HAP or combination of carcinogenic PB-HAP in the Tier 1 screening assessment exceeds the Tier 1 screening threshold emission rate for any facility (*i.e.*, the screening value is greater than 1), we conduct a second screening assessment, which we call the Tier 2 screening assessment. The Tier 2 screening assessment separates the Tier 1 combined fisher and farmer exposure scenario into fisher, farmer, and gardener scenarios that retain upper-bound ingestion rates.

In the Tier 2 screening assessment, the location of each facility that exceeds a Tier 1 screening threshold emission rate is used to refine the assumptions associated with the Tier 1 fisher/farmer scenarios at that facility. A key assumption in the Tier 1 screening assessment is that a lake and/or farm is located near the facility. As part of the Tier 2 screening assessment, we use a U.S. Geological Survey (USGS) database to identify actual waterbodies within 50 km of each facility and assume the fisher only consumes fish from lakes within that 50 km zone. We also examine the differences between local meteorology near the facility and the meteorology used in the Tier 1 screening assessment. We then adjust the previously-developed Tier 1 screening threshold emission rates for each PB-HAP for each facility based on an understanding of how exposure concentrations estimated for the screening scenario change with the use of local meteorology and the USGS lakes database.

In the Tier 2 farmer scenario, we maintain an assumption that the farm is located within 0.5 km of the facility and that the farmer consumes meat, eggs, dairy, vegetables, and fruit produced near the facility. We may further refine the Tier 2 screening analysis by assessing a gardener scenario to characterize a range of exposures, with the gardener scenario being more plausible in RTR evaluations. Under the gardener scenario, we assume the gardener consumes home-produced eggs, vegetables, and fruit products at the same ingestion rate as the farmer. The Tier 2 screen continues to rely on the high-end food intake assumptions that were applied in Tier 1 for local fish (adult female angler at 99th percentile fish consumption[16]) and locally grown or raised foods (90th percentile consumption of locally grown or raised foods for the farmer and

[16] Burger, J. 2002. Daily consumption of wild fish and game: Exposures of high end recreationists. *International Journal of Environmental Health Research* 12:343–354.

gardener scenarios[17]). If PB-HAP emission rates do not result in a Tier 2 screening value greater than 1, we consider those PB-HAP emissions to pose risks below a level of concern. If the PB-HAP emission rates for a facility exceed the Tier 2 screening threshold emission rates, we may conduct a Tier 3 screening assessment.

There are several analyses that can be included in a Tier 3 screening assessment, depending upon the extent of refinement warranted, including validating that the lakes are fishable, locating residential/garden locations for urban and/or rural settings, considering plume-rise to estimate emissions lost above the mixing layer, and considering hourly effects of meteorology and plume rise on chemical fate and transport (a time-series analysis). If necessary, the EPA may further refine the screening assessment through a site-specific assessment.

In evaluating the potential multipathway risk from emissions of lead compounds, rather than developing a screening threshold emission rate, we compare maximum estimated chronic inhalation exposure concentrations to the level of the current National Ambient Air Quality Standard (NAAQS) for lead.[18] Values below the level of the primary (health-based) lead NAAQS are considered to have a low potential for multipathway risk.

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[17] U.S. EPA. *Exposure Factors Handbook 2011 Edition (Final)*. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R–09/052F, 2011.

[18] In doing so, the EPA notes that the legal standard for a primary NAAQS – that a standard is requisite to protect public health and provide an adequate margin of safety (CAA section 109(b)) – differs from the CAA section 112(f) standard (requiring, among other things, that the standard provide an "ample margin of safety to protect public health"). However, the primary lead NAAQS is a reasonable measure of determining risk acceptability (*i.e.*, the first step of the Benzene NESHAP analysis) since it is designed to protect the most susceptible group in the human population – children, including children living near major lead emitting sources. 73 FR 67002/3; 73 FR 67000/3; 73 FR 67005/1. In addition, applying the level of the primary lead NAAQS at the risk acceptability step is conservative, since that primary lead NAAQS reflects an adequate margin of safety.

For further information on the multipathway assessment approach, see Appendix 6 of the *Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule,* which is available in the docket for this action.

5. How do we conduct the environmental risk screening assessment?

a. Adverse Environmental Effect, Environmental HAP, and Ecological Benchmarks

The EPA conducts a screening assessment to examine the potential for an adverse environmental effect as required under section 112(f)(2)(A) of the CAA. Section 112(a)(7) of the CAA defines "adverse environmental effect" as "any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas."

The EPA focuses on eight HAP, which are referred to as "environmental HAP," in its screening assessment: six PB-HAP and two acid gases. The PB-HAP included in the screening assessment are arsenic compounds, cadmium compounds, dioxins/furans, POM, mercury (both inorganic mercury and methyl mercury), and lead compounds. The acid gases included in the screening assessment are hydrochloric acid (HCl) and hydrogen fluoride (HF).

HAP that persist and bioaccumulate are of particular environmental concern because they accumulate in the soil, sediment, and water. The acid gases, HCl and HF, are included due to their well-documented potential to cause direct damage to terrestrial plants. In the environmental risk screening assessment, the EPA evaluates the following four exposure media: terrestrial soils, surface water bodies (includes water-column and benthic sediments), fish consumed by wildlife, and air. Within these four exposure media, the EPA evaluates nine ecological assessment endpoints, which are defined by the ecological entity and its attributes. For PB-HAP (other than

lead), both community-level and population-level endpoints are included. For acid gases, the ecological assessment evaluated is terrestrial plant communities.

An ecological benchmark represents a concentration of HAP that has been linked to a particular environmental effect level. For each environmental HAP, the EPA identified the available ecological benchmarks for each assessment endpoint. The EPA identified, where possible, ecological benchmarks at the following effect levels: probable effect levels, lowest-observed-adverse-effect level, and no-observed-adverse-effect level. In cases where multiple effect levels were available for a particular PB-HAP and assessment endpoint, the EPA uses all of the available effect levels to help us to determine whether ecological risks exist and, if so, whether the risks could be considered significant and widespread.

For further information on how the environmental risk screening assessment was conducted, including a discussion of the risk metrics used, how the environmental HAP were identified, and how the ecological benchmarks were selected, see Appendix 9 of the *Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this action.

b. Environmental Risk Screening Methodology

For the environmental risk screening assessment, the EPA first determined whether any facilities in the PCWP source category emitted any of the environmental HAP. For the PCWP source category, the EPA identified emissions of arsenic compounds, cadmium compounds, dioxins/furans, lead compounds, mercury compounds, POM, HCl, and HF. Because the above environmental HAP are emitted by at least one facility in the source category, we proceeded to the second step of the evaluation.

c. PB-HAP Methodology

The environmental screening assessment includes six PB-HAP, arsenic compounds, cadmium compounds, dioxins/furans, POM, mercury (both inorganic mercury and methyl mercury), and lead compounds. With the exception of lead, the environmental risk screening assessment for PB-HAP consists of three tiers. The first tier of the environmental risk screening assessment uses the same health-protective conceptual model that is used for the Tier 1 human health screening assessment. TRIM.FaTE model simulations were used to back-calculate Tier 1 screening threshold emission rates. The screening threshold emission rates represent the emission rate in tons of pollutant per year that results in media concentrations at the facility that equal the relevant ecological benchmark. To assess emissions from each facility in the category, the reported emission rate for each PB-HAP was compared to the Tier 1 screening threshold emission rate for that PB-HAP for each assessment endpoint and effect level. If emissions from a facility do not exceed the Tier 1 screening threshold emission rate, the facility "passes" the screening assessment, and, therefore, is not evaluated further under the screening approach. If emissions from a facility exceed the Tier 1 screening threshold emission rate, the EPA evaluates the facility further in Tier 2.

In Tier 2 of the environmental screening assessment, the screening threshold emission rates are adjusted to account for local meteorology and the actual location of lakes in the vicinity of facilities that did not pass the Tier 1 screening assessment. For soils, the EPA evaluates the average soil concentration for all soil parcels within a 7.5-km radius for each facility and PB-HAP. For the water, sediment, and fish tissue concentrations, the highest value for each facility for each pollutant is used. If emission concentrations from a facility do not exceed the Tier 2 screening threshold emission rate, the facility "passes" the screening assessment and typically is

not evaluated further. If emissions from a facility exceed the Tier 2 screening threshold emission rate, the EPA evaluates the facility further in Tier 3.

As in the multipathway human health risk assessment, in Tier 3 of the environmental screening assessment, the EPA examines the suitability of the lakes around the facilities to support life and remove those that are not suitable (*e.g.*, lakes that have been filled in or are industrial ponds), adjust emissions for plume-rise, and conduct hour-by-hour time-series assessments. If these Tier 3 adjustments to the screening threshold emission rates still indicate the potential for an adverse environmental effect (*i.e.*, facility emission rate exceeds the screening threshold emission rate), the EPA may elect to conduct a more refined assessment using more site-specific information. If, after additional refinement, the facility emission rate still exceeds the screening threshold emission rate, the facility may have the potential to cause an adverse environmental effect.

To evaluate the potential for an adverse environmental effect from lead, the EPA compared the average modeled air concentrations (from HEM-3) of lead around each facility in the source category to the level of the secondary NAAQS for lead. The secondary lead NAAQS is a reasonable means of evaluating environmental risk because it is set to provide substantial protection against adverse welfare effects which can include "effects on soils, water, crops, vegetation, man-made materials, animals, wildlife, weather, visibility and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being."

d. Acid Gas Environmental Risk Methodology

The environmental screening assessment for acid gases evaluates the potential phytotoxicity and reduced productivity of plants due to chronic exposure to HF and HCl. The

environmental risk screening methodology for acid gases is a single-tier screening assessment that compares modeled ambient air concentrations (from AERMOD) to the ecological benchmarks for each acid gas. To identify a potential adverse environmental effect (as defined in section 112(a)(7) of the CAA) from emissions of HF and HCl, the EPA evaluates the following metrics: the size of the modeled area around each facility that exceeds the ecological benchmark for each acid gas, in acres and km^2; the percentage of the modeled area around each facility that exceeds the ecological benchmark for each acid gas; and the area-weighted average screening value around each facility (calculated by dividing the area-weighted average concentration over the 50-km modeling domain by the ecological benchmark for each acid gas). For further information on the environmental screening assessment approach, see Appendix 9 of the *Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this action.

6. How do we conduct facility-wide assessments?

To put the source category risks in context, the EPA typically examines the risks from the entire "facility," where the facility includes all HAP-emitting operations within a contiguous area and under common control. In other words, the EPA examines the HAP emissions not only from the source category emission points of interest, but also emissions of HAP from all other emission sources at the facility for which the EPA has data. For this source category, the EPA conducted the facility-wide assessment using a dataset compiled from the 2014 NEI. The source category records of that NEI dataset were removed and replaced with the quality-assured ICR source category dataset described in the memorandum titled *Preparation of the Residual Risk Modeling Input File for the PCWP NESHAP,* in the docket for this rulemaking. This ICR source

category dataset was then combined with the non-source category records from the NEI for that facility. The combined facility-wide file was then used to analyze risks due to the inhalation of HAP that are emitted "facility-wide" for the populations residing within 50 km of each facility, consistent with the methods used for the source category analysis described above. For these facility-wide risk analyses, the modeled source category risks were compared to the facility-wide risks to determine the portion of the facility-wide risks that could be attributed to the source category addressed in this proposal. The EPA also specifically examined the facility that was associated with the highest estimate of risk and determined the percentage of that risk attributable to the source category of interest. The *Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, available through the docket for this action, provides the methodology and results of the facility-wide analyses, including all facility-wide risks and the percentage of source category contribution to facility-wide risks.

7. How do we consider uncertainties in risk assessment?

Uncertainty and the potential for bias are inherent in all risk assessments, including those performed for this proposal. Although uncertainty exists, we believe that our approach, which used conservative tools and assumptions, ensures that our decisions are health and environmentally protective. A brief discussion of the uncertainties in the RTR emissions dataset, dispersion modeling, inhalation exposure estimates, and dose-response relationships follows below. Also included are those uncertainties specific to acute screening assessments, multipathway screening assessments, and our environmental risk screening assessments. A more thorough discussion of these uncertainties is included in the *Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and*

Technology Review Proposed Rule, which is available in the docket for this action. If a multipathway site-specific assessment was performed for this source category, a full discussion of the uncertainties associated with that assessment can be found in Appendix 11 of that document, *Site-Specific Human Health Multipathway Residual Risk Assessment Report*.

a. Uncertainties in the RTR Emissions Dataset

Although the development of the RTR emissions dataset involved quality assurance/quality control processes, the accuracy of emissions values will vary depending on the source of the data, the degree to which data are incomplete or missing, the degree to which assumptions made to complete the datasets are accurate, errors in emission estimates, and other factors. For example, older emission factors that do not account for relatively recent reductions in resin formaldehyde content may have been used by some PCWP mills to estimate emissions from uncontrolled process units that are hard to test, resulting in overestimation of formaldehyde emissions. The emission estimates considered in this analysis generally are annual totals for certain years, and they do not reflect short-term fluctuations during the course of a year or variations from year to year. For facilities with missing or invalid short-term emission estimates in their PCWP ICR data, the estimates of maximum hourly emission rates for the acute effects screening assessment were based on an emission adjustment factor applied to the average annual hourly emission rates, which are intended to account for emission fluctuations due to normal facility operations.

b. Uncertainties in Dispersion Modeling

The EPA recognizes there is uncertainty in ambient concentration estimates associated with any model, including the EPA's recommended regulatory dispersion model, AERMOD. In using a model to estimate ambient pollutant concentrations, the user chooses certain options to apply. For RTR assessments, the EPA selects some model options that have the potential to

overestimate ambient air concentrations (*e.g.*, not including plume depletion or pollutant transformation). The EPA selects other model options that have the potential to underestimate ambient impacts (*e.g.*, not including building downwash). Other options that the EPA selects have the potential to either under- or overestimate ambient levels (*e.g.*, meteorology and receptor locations). On balance, considering the directional nature of the uncertainties commonly present in ambient concentrations estimated by dispersion models, the approach the EPA applies in the RTR assessments should yield unbiased estimates of ambient HAP concentrations. After reviewing the physical characteristics of emission releases from batch and continuous lumber kilns, dispersion and risk modelers at the EPA recommend the buoyant plume rise resulting from the elevated temperature of kiln exhaust be taken into account when modeling kiln fugitive emissions to improve accuracy. Appendix 12 of the document, *Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule,* in the docket for this rulemaking describes the methodology and results. We also note that the selection of meteorology dataset location could have an impact on the risk estimates. As the EPA continues to update and expand the library of meteorological station data used in our risk assessments, we expect to reduce this variability.

c. Uncertainties in Inhalation Exposure Assessment

Although every effort is made to identify all of the relevant facilities and emission points, as well as to develop accurate estimates of the annual emission rates for all relevant HAP, the uncertainties in the EPA's emission inventory likely dominate the uncertainties in the exposure assessment. Some uncertainties in our exposure assessment include human mobility, using the centroid of each census block, assuming lifetime exposure, and assuming only outdoor exposures. For most of these factors, there is neither an under nor overestimate when looking at

the maximum individual risk or the incidence, but the shape of the distribution of risks may be affected. With respect to outdoor exposures, actual exposures may not be as high if people spend time indoors, especially for very reactive pollutants or larger particles. For all factors, the EPA reduces uncertainty when possible. For example, with respect to census-block centroids, the EPA analyzes large blocks using aerial imagery and adjust locations of the block centroids to better represent the population in the blocks. The EPA also adds additional receptor locations where the population of a block is not well represented by a single location.

d. Uncertainties in Dose-Response Relationships

There are uncertainties inherent in the development of the dose-response values used in the EPA's risk assessments for cancer effects from chronic exposures and noncancer effects from both chronic and acute exposures. Some uncertainties are generally expressed quantitatively, and others are generally expressed in qualitative terms. We note, as a preface to this discussion, a point on dose-response uncertainty that is stated in the EPA's *2005 Guidelines for Carcinogen Risk Assessment*; namely, that "the primary goal of EPA actions is protection of human health; accordingly, as an Agency policy, risk assessment procedures, including default options that are used in the absence of scientific data to the contrary, should be health protective" (the EPA's *2005 Guidelines for Carcinogen Risk Assessment*, page 1-7). This is the approach followed here as summarized in the next paragraphs.

Cancer UREs used in the EPA's risk assessments are those that have been developed to generally provide an upper bound estimate of risk.[19] That is, they represent a "plausible upper

[19] IRIS glossary (*https://ofmpub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&glossaryName=IRIS%20Glossary*).

limit to the true value of a quantity" (although this is usually not a true statistical confidence limit). In some circumstances, the true risk could be as low as zero; however, in other circumstances the risk could be greater.[20] Chronic noncancer RfC and reference dose (RfD) values represent chronic exposure levels that are intended to be health-protective levels. To derive dose-response values that are intended to be "without appreciable risk," the methodology relies upon an uncertainty factor (UF) approach,[21] which considers uncertainty, variability, and gaps in the available data. The UFs are applied to derive dose-response values that are intended to protect against appreciable risk of deleterious effects.

Many of the UFs used to account for variability and uncertainty in the development of acute dose-response values are quite similar to those developed for chronic durations. Additional adjustments are often applied to account for uncertainty in extrapolation from observations at one exposure duration (*e.g.*, 4 hours) to derive an acute dose-response value at another exposure duration (*e.g.*, 1 hour). Not all acute dose-response values are developed for the same purpose, and care must be taken when interpreting the results of an acute assessment of human health effects relative to the dose-response value or values being exceeded. Where relevant to the estimated exposures, the lack of acute dose-response values at different levels of severity should be factored into the risk characterization as potential uncertainties.

Uncertainty also exists in the selection of ecological benchmarks for the environmental risk screening assessment. The EPA established a hierarchy of preferred benchmark sources to

[20] An exception to this is the URE for benzene, which is considered to cover a range of values, each end of which is considered to be equally plausible, and which is based on maximum likelihood estimates.

[21] See *A Review of the Reference Dose and Reference Concentration Processes*, U.S. EPA, December 2002, and *Methods for Derivation of Inhalation Reference Concentrations and Application of Inhalation Dosimetry*, U.S. EPA, 1994.

allow selection of benchmarks for each environmental HAP at each ecological assessment endpoint. We searched for benchmarks for three effect levels (*i.e.*, no-effects level, threshold-effect level, and probable effect level), but not all combinations of ecological assessment/environmental HAP had benchmarks for all three effect levels. Where multiple effect levels were available for a particular HAP and assessment endpoint, we used all of the available effect levels to help us determine whether risk exists and whether the risk could be considered significant and widespread.

Although the EPA makes every effort to identify appropriate human health effect dose-response values for all pollutants emitted by the sources in this risk assessment, some HAP emitted by this source category are lacking dose-response assessments. Accordingly, these pollutants cannot be included in the quantitative risk assessment, which could result in quantitative estimates understating HAP risk. To help to alleviate this potential underestimate, where the EPA concludes similarity with a HAP for which a dose-response value is available, we use that value as a surrogate for the assessment of the HAP for which no value is available. To the extent use of surrogates indicates appreciable risk, the EPA may identify a need to increase priority for an IRIS assessment for that substance. We additionally note that, generally speaking, HAP of greatest concern due to environmental exposures and hazard are those for which dose-response assessments have been performed, reducing the likelihood of understating risk. Further, HAP not included in the quantitative assessment are assessed qualitatively and considered in the risk characterization that informs the risk management decisions, including consideration of HAP reductions achieved by various control options.

For a group of compounds that are unspeciated (*e.g.*, glycol ethers), the EPA conservatively uses the most protective dose-response value of an individual compound in that

group to estimate risk. Similarly, for an individual compound in a group (*e.g.*, ethylene glycol diethyl ether) that does not have a specified dose-response value, the EPA also applies the most protective dose-response value from the other compounds in the group to estimate risk.

e. Uncertainties in Acute Inhalation Screening Assessments

In addition to the uncertainties highlighted above, there are several factors specific to the acute exposure assessment that the EPA conducts as part of the risk review under section 112 of the CAA. The accuracy of an acute inhalation exposure assessment depends on the simultaneous occurrence of independent factors that may vary greatly, such as hourly emission rates, meteorology, and the presence of a person. In the acute screening assessment that the EPA conducts under the RTR program, we assume that peak emissions from the source category and reasonable worst-case air dispersion conditions (*i.e.*, 99th percentile) co-occur. The EPA then includes the additional assumption that a person is located at this point at the same time. Together, these assumptions represent a reasonable worst-case exposure scenario. In most cases, it is unlikely that a person would be located at the point of maximum exposure during the time when peak emissions and reasonable worst-case air dispersion conditions occur simultaneously.

f. Uncertainties in the Multipathway and Environmental Risk Screening Assessments

For each source category, the EPA generally relies on site-specific levels of PB-HAP or environmental HAP emissions to determine whether a refined assessment of the impacts from multipathway exposures is necessary or whether it is necessary to perform an environmental screening assessment. This determination is based on the results of a three-tiered screening assessment that relies on the outputs from models – TRIM.FaTE and AERMOD – that estimate environmental pollutant concentrations and human exposures for five PB-HAP (dioxins, POM, mercury, cadmium, and arsenic) and two acid gases (HF and HCl). For lead, the EPA uses AERMOD to determine ambient air concentrations, which are then compared to the secondary

NAAQS standard for lead. Two important types of uncertainty associated with the use of these models in RTR risk assessments and inherent to any assessment that relies on environmental modeling are model uncertainty and input uncertainty.[22]

Model uncertainty concerns whether the model adequately represents the actual processes (*e.g.*, movement and accumulation) that might occur in the environment. For example, does the model adequately describe the movement of a pollutant through the soil? This type of uncertainty is difficult to quantify. However, based on feedback received from previous EPA SAB reviews and other reviews, we are confident that the models used in the screening assessments are appropriate and state-of-the-art for the multipathway and environmental screening risk assessments conducted in support of RTR.

Input uncertainty is concerned with how accurately the models have been configured and parameterized for the assessment at hand. For Tier 1 of the multipathway and environmental screening assessments, the EPA configured the models to avoid underestimating exposure and risk. This was accomplished by selecting upper-end values from nationally representative datasets for the more influential parameters in the environmental model, including selection and spatial configuration of the area of interest, lake location and size, meteorology, surface water, soil characteristics, and structure of the aquatic food web. The EPA also assumes an ingestion exposure scenario and values for human exposure factors that represent reasonable maximum exposures.

[22] In the context of this discussion, the term "uncertainty" as it pertains to exposure and risk encompasses both ***variability*** in the range of expected inputs and screening results due to existing spatial, temporal, and other factors, as well as ***uncertainty*** in being able to accurately estimate the true result.

In Tier 2 of the multipathway and environmental screening assessments, the EPA refines the model inputs to account for meteorological patterns in the vicinity of the facility versus using upper-end national values and identifies the actual location of lakes near the facility rather than the default lake location applied in Tier 1. By refining the screening approach in Tier 2 to account for local geographical and meteorological data, the EPA decreases the likelihood that concentrations in environmental media are overestimated, thereby increasing the usefulness of the screening assessment. In Tier 3 of the screening assessments, the EPA refines the model inputs again to account for hour-by-hour plume rise and the height of the mixing layer. The EPA can also use those hour-by-hour meteorological data in a TRIM.FaTE run using the screening configuration corresponding to the lake location. These refinements produce a more accurate estimate of chemical concentrations in the media of interest, thereby reducing the uncertainty with those estimates. The assumptions and the associated uncertainties regarding the selected ingestion exposure scenario are the same for all three tiers.

For the environmental screening assessment for acid gases, the EPA employs a single-tiered approach. The EPA uses the modeled air concentrations and compare those with ecological benchmarks.

For all tiers of the multipathway and environmental screening assessments, the EPA's approach to addressing model input uncertainty is generally cautious. The EPA chooses model inputs from the upper end of the range of possible values for the influential parameters used in the models, and assumes that the exposed individual exhibits ingestion behavior that would lead to a high total exposure. This approach reduces the likelihood of not identifying high risks for adverse impacts.

Despite the uncertainties, when individual pollutants or facilities do not exceed screening threshold emission rates (*i.e.*, screen out), the EPA is confident that the potential for adverse multipathway impacts on human health is very low. On the other hand, when individual pollutants or facilities do exceed screening threshold emission rates, it does not mean that impacts are significant, only that the EPA cannot rule out that possibility and that a refined assessment for the site might be necessary to obtain a more accurate risk characterization for the source category.

The EPA evaluates the following HAP in the multipathway and/or environmental risk screening assessments, where applicable: arsenic, cadmium, dioxins/furans, lead, mercury (both inorganic and methyl mercury), POM, HCl, and HF. These HAP represent pollutants that can cause adverse impacts either through direct exposure to HAP in the air or through exposure to HAP that are deposited from the air onto soils and surface waters and then through the environment into the food web. These HAP represent those HAP for which the EPA can conduct a meaningful multipathway or environmental screening risk assessment. For other HAP not included in our screening assessments, the model has not been parameterized such that it can be used for that purpose. In some cases, depending on the HAP, the EPA may not have appropriate multipathway models that allow us to predict the concentration of that pollutant. The EPA acknowledges that other HAP beyond these that we are evaluating may have the potential to cause adverse effects and, therefore, the EPA may evaluate other relevant HAP in the future, as modeling science and resources allow.

IV. Analytical Results and Proposed Decisions

A. What are the results of the risk assessment and analyses?

1. Chronic Inhalation Risk Assessment Results

Table 2 of this preamble provides an overall summary of the inhalation risk results. The results of the chronic baseline inhalation cancer risk assessment indicate that, based on estimates of current actual and allowable emissions, the MIR posed by the PCWP source category was estimated to be 30-in-1 million. The risk driver is chiefly formaldehyde emissions from batch and continuous lumber kilns. The total estimated cancer incidence based on actual and allowable emission levels from all PCWP emission sources is 0.03 excess cancer cases per year, or one case in every 33 years, with emissions from the lumber kilns representing 43 percent of the modeled cancer incidence in the source category. Emissions of formaldehyde, acetaldehyde, and chromium VI compounds contributed 93 percent to this cancer incidence with formaldehyde being the largest contributor (76 percent of the incidence). Based upon actual emissions from the source category, approximately 200,000 people were exposed to cancer risks above or equal to 1-in-1 million.

The maximum chronic noncancer HI (TOSHI) values based on actual and allowable emissions for the source category were estimated to be less than 1. Based upon actual emissions from the source category, respiratory risks were driven by acrolein, acetaldehyde, and formaldehyde emissions from batch lumber kilns. Based upon allowable emissions from the source category, the respiratory risk was driven by methylene diphenyl diisocyanate emissions from a miscellaneous coating operation and formaldehyde emissions from lumber kilns.

Table 2. Plywood and Composite Wood Products Inhalation Risk Assessment Results[1]

Risk Assessment	Number of Facilities[2]	Maximum Individual Cancer Risk	Estimated Population at Increased	Estimated Annual Cancer	Maximum Chronic	Maximum Screening Acute

		(in 1 million)[3]	**Risk of Cancer ≥ 1-in-1 Million**	**Incidence (cases per year)**	**Noncancer TOSHI[4]**	**Noncancer HQ[5]**
Baseline Actual Emissions						
Source Category	233	30	204,000	0.03	0.8	4 (REL) 0.2 (AEGL-1)
Facility-Wide	233	30	260,000	0.04	1	-
Baseline Allowable Emissions						
Source Category	233	30	230,000	0.03	0.8	-

[1] Based on actual and allowable emissions.
[2] Number of facilities evaluated in the risk assessment. Includes 230 operating facilities subject to 40 CFR part 63, subpart DDDD plus three existing facilities that are currently closed but maintain active operating permits.
[3] Maximum individual excess lifetime cancer risk due to HAP emissions from the source category.
[4] Maximum TOSHI. The target organ with the highest TOSHI for the PCWP source category is the respiratory system.
[5] The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of HQ values. HQ values shown use the lowest available acute threshold value, which in most cases is the REL. When an HQ exceeds 1, the EPA also shows the HQ using the next lowest available acute dose-response value.

2. Screening Level Acute Risk Assessment Results

Worst-case acute HQs were calculated for every HAP for which there is an acute health benchmark using actual emissions. The maximum refined off-site acute noncancer HQ values for the source category were equal to 4 from acrolein emissions and 2 from formaldehyde emissions (based on the acute (1-hr) REL for these pollutants). The acrolein and formaldehyde maximum HQ values were at separate facilities. No other acute health benchmarks were exceeded for this source category. The acute risk driver for acrolein was primarily from continuous lumber kilns and the MIR location for acute formaldehyde risks were from batch lumber kilns. The continuous and batch lumber kilns were modeled with hourly emissions ranging from 2 to 8 times the annual average hourly emissions rate. Acute HQs are not calculated for allowable or whole facility emissions.

3. Multipathway Risk Screening Results

Results of the worst-case Tier 1 screening analysis indicate that PB-HAP emissions (based on estimates of actual emissions) emitted from the source category exceeded the screening values for the carcinogenic PB-HAP (arsenic, dioxin/furan, and POM compounds) and for the noncarcinogenic PB-HAP (cadmium and mercury) based upon emissions from 48 facilities reporting carcinogenic PB-HAP and 19 facilities reporting non-carcinogenic PB-HAP in the source category. For the PB-HAP and facilities that did not screen out at Tier 1, the EPA conducted a Tier 2 screening analysis.

The Tier 2 screen replaces some of the assumptions used in Tier 1 with site-specific data, the location of fishable lakes, and local wind direction and speed. The Tier 2 screen continues to rely on high-end assumptions about consumption of local fish and locally grown or raised foods (adult female angler at 99th percentile consumption for fish[23] for the fisher scenario and 90th percentile for consumption of locally raised livestock and grown produce (vegetables and fruits)[24]) for the farmer scenario and uses an assumption that the same individual consumes each of these foods in high end quantities (*i.e.,* that an individual has high end ingestion rates for each food). The result of this analysis was the development of site-specific concentrations of dioxin/furan, POM compounds, arsenic compounds, cadmium and mercury compounds. It is important to note that, even with the inclusion of some site-specific information in the Tier 2 analysis, the multipathway screening analysis is a still a very conservative, health-protective assessment (*e.g.,* upper-bound consumption of local fish, locally grown, and/or raised foods) and

[23] Burger, J. 2002. *Daily consumption of wild fish and game: Exposures of high end recreationists.* International Journal of Environmental Health Research 12:343–354.
[24] U.S. EPA. *Exposure Factors Handbook 2011 Edition (Final).* U.S. Environmental Protection Agency, Washington, DC, EPA/600/R–09/052F, 2011.

in all likelihood will yield results that serve as an upper-bound multipathway risk associated with a facility.

Based on this upper-bound Tier 2 screening assessment for carcinogens, the dioxin/furan and POM emission rates for all facilities and scenarios were below levels of concern. Arsenic emissions exceeded the screening value by a factor of 70 for the farmer scenario, a factor of 40 for the gardener scenario, and a factor of 6 for the fisher scenario. The Tier 2 gardener scenario is based upon the same ingestion rate of produce as the farmer for a rural environment. No additional refined screens or site-specific assessments were conducted for emissions of arsenic based upon the conservative nature of the Tier 2 screen and because the screening value was below the level of acceptability of 100-in-1 million. For the non-carcinogens, emissions of cadmium were below an HQ of 1 for the Tier 2 fisher scenario. For mercury, three facilities exceeded the Tier 2 multipathway screening values of 1 by a factor of 2 based upon aggregate lake impacts by facilities within the source category for the fisher scenario.

For mercury, the EPA conducted a Tier 3 multipathway screen for two facilities which included two of the three individual stages. These stages included a lake assessment for fishability and the mass lost due to plume rise, a time-series assessment was not conducted. A lake and plume rise assessment was conducted resulting in a maximum Tier 3 screening value of 2, a 20-percent reduction in their Tier 2 screening value was achieved due to plume rise.
A screening value in any of the tiers is not an estimate of the cancer risk or a noncancer HQ (or HI). Rather, a screening value represents a high-end estimate of what the risk or hazard may be. For example, facility emissions resulting in a screening value of 2 for a non-carcinogen can be interpreted to mean that we are confident that the HQ would be lower than 2. Similarly, facility emissions resulting in a cancer screening value of 40 for a carcinogen means that we are

confident that the cancer risk is lower than 40-in-1 million. Our confidence comes from the health-protective assumptions that are incorporated into the screens: we choose inputs from the upper end of the range of possible values for the influential parameters used in the screens; and we assume food consumption behaviors that would lead to high total exposure. This risk assessment estimates the maximum hazard for mercury through fish consumption based on upper bound screens and the maximum excess cancer risks from dioxins/furans and arsenic through ingestion of fish and farm produce.

When we progress from the model designs of the Tier 1, 2, and 3 screens to a site-specific assessment, we refine the risk assessment through incorporation of additional site-specific data and enhanced model designs. Site-specific refinements include the following; (1) improved spatial locations identifying the boundaries of the watershed and lakes within the watershed as it relates to surrounding facilities within the source category; (2) calculating actual soil/water run-off amounts to target lakes based upon actual soil type(s) and elevation changes associated with the affected watershed versus assuming a worst-case assumption of 100-percent run-off to target lakes; and (3) incorporating AERMOD deposition of pollutants into TRIM.FaTE to accurately account for site-specific release parameters such as stack heights and exit gas temperatures, versus using TRIMFaTE's simple dispersion algorithms that assume the pollutant is uniformly distributed within the airshed. These refinements have the net effect of improved modeling of the mass of HAP entering a lake by more accurately defining the watershed/lake boundaries as well as the dispersion of HAP into the atmosphere to better reflect deposition contours across all target watersheds and lakes in our 50 km model domain.

The maximum mercury Tier 2 noncancer screening value for this source category is 2 with subsequent refinement resulting in a Tier 3 screening value of 2. No additional refinements

to the Tier 3 screen value of 2 were conducted by the EPA. Risk results from four site-specific mercury assessments the EPA has conducted for four RTR source categories resulted in noncancer HQs that range from 50 to 800 times lower than the respective Tier 2 screening value for these facilities (refer to EPA Docket ID: EPA-HQ-OAR-2016-0243 for a copy of these reports).[25] Based on our review of these analyses, we would expect at least a one order of magnitude decrease in all Tier 2 noncancer screening values for mercury for the PCWP source category, if we were to perform a site-specific assessment. In addition, based upon the conservative nature of the screens and the level of additional refinements that would go into a site-specific multipathway assessment, were one to be conducted, we are confident that the HI for ingestion exposure, specifically mercury through fish ingestion, is less than 1.

Further details on the Tier 3 screening assessment can be found in Appendix 11 of *Residual Risk Assessment for the Plywood Composite and Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, in the docket for this action.

In evaluating the potential for multipathway effects from emissions of lead, the EPA compared modeled annual lead concentrations to the primary NAAQS level for lead (0.15 $\mu g/m^3$, arithmetic mean concentration over a 3-month period. The highest annual average lead concentration of 0.013 $\mu g/m^3$ is below the NAAQS level for lead, indicating a low potential for multipathway impacts.

[25] EPA Docket records: Appendix 11 of the *Residual Risk Assessment for the Taconite Manufacturing Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*; Appendix 11 of the *Residual Risk Assessment for the Integrated Iron and Steel Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*; Appendix 11 of the *Residual Risk Assessment for the Portland Cement Manufacturing Source Category in Support of the 2018 Risk and Technology Review* Final Rule; and Appendix 11 of the *Residual Risk Assessment for the Coal and Oil-Fired EGU Source Category in Support of the 2018 Risk and Technology Review Proposed Rule*.

4. Environmental Risk Screening Results

The EPA conducted an environmental risk screening assessment for the PCWP source category for the following pollutants: arsenic, cadmium, dioxins/furans, HCl, HF, lead, mercury (methyl mercury and mercuric chloride), and POM.

In the Tier 1 screening analysis for PB-HAP (other than lead, which was evaluated differently), arsenic, cadmium, dioxins/furans, and POM emissions had no Tier 1 exceedances for any ecological benchmark. Divalent mercury emissions at nine facilities had Tier 1 exceedances for the surface soil threshold levels (invertebrate and plant communities) by a maximum screening value of 5. Methyl mercury emissions at 13 facilities had Tier 1 exceedances for the surface soil NOAEL (avian ground insectivores) by a maximum screening value of 7.

A Tier 2 screening assessment was performed for divalent mercury and methyl mercury. Divalent mercury and methyl mercury had no Tier 2 exceedances for any ecological benchmark. For lead, the EPA did not estimate any exceedances of the secondary lead NAAQS. For HCl and HF, the average modeled concentration around each facility (*i.e.,* the average concentration of all off-site data points in the modeling domain) did not exceed any ecological benchmark. In addition, each individual modeled concentration of HCl and HF (*i.e.,* each off-site data point in the modeling domain) was below the ecological benchmarks for all facilities. Based on the results of the environmental risk screening analysis, the EPA does not expect an adverse environmental effect as a result of HAP emissions from this source category.

5. Facility-Wide Risk Results

Results of the assessment of facility-wide emissions indicate that of the 233 facilities, 182 facilities have a facility-wide MIR cancer risk greater than 1-in-1 million. The maximum facility-wide cancer risk is 30-in-1 million, mainly driven by formaldehyde emissions from batch and

continuous lumber kilns. The total estimated cancer incidence from the whole facility is 0.04 excess cancer cases per year, or one case in every 25 years. Approximately 260,000 people are estimated to have cancer risks greater than 1-in-1 million. The maximum facility-wide chronic noncancer TOSHI is estimated to be equal to 1, driven by emissions of acrolein, chlorine, and HCl from non-category sources.

6. What demographic groups might benefit from this regulation?

To examine the potential for any environmental justice issues that might be associated with the source category, the EPA performed a demographic analysis, which is an assessment of risk to individual demographic groups of the populations living within 5 km and within 50 km of the facilities. In the analysis, the EPA evaluated the distribution of HAP-related cancer and noncancer risk from the PCWP source category across different demographic groups within the populations living near facilities.

The results of the demographic analysis are summarized in Table 3 below. These results, for various demographic groups, are based on the estimated risk from actual emissions levels for the population living within 50 km of the facilities.

Table 3. Plywood and Composite Wood Products Demographic Risk Analysis Results

	Nationwide	**Population with Cancer Risk at or Above 1-in-1 Million Due to PCWP**	**Population with Chronic Hazard Index Above 1 Due to PCWP**
Total Population	317,746,049	204,164	0
Race by Percent			
White	62	63	0
All Other Races	38	37	0
Race by Percent			
Hispanic or Latino (includes white and nonwhite)	18	9	0
African American	12	24	0
Native American	0.8	1.1	0
Other and Multiracial	7	3	0
Income by Percent			

Below Poverty Level	14	23	0
Above Poverty Level	86	77	0
Education by Percent			
Over 25 and without a High School Diploma	14	18	0
Over 25 and with a High School Diploma	86	82	0
Linguistically Isolated by Percent			
Linguistically Isolated	6	2	0

The results of the PCWP source category demographic analysis indicate that emissions from the source category expose approximately 200,000 people to a cancer risk at or above 1-in-1 million and zero people to a chronic noncancer TOSHI greater than 1. The percentages of the at-risk population in four of the eleven demographic groups (African American, Native American, below poverty level, and over 25 without a high school diploma) are greater than their respective nationwide percentages.

The methodology and the results of the demographic analysis are presented in a technical report, *Risk and Technology Review – Analysis of Demographic Factors for Populations Living Near Plywood and Composite Wood Products Source Category*, available in the docket for this action.

B. What are our proposed decisions regarding risk acceptability, ample margin of safety, and adverse environmental effect?

1. Risk Acceptability

As noted in section II.A of this preamble, the EPA sets standards under CAA section 112(f)(2) using "a two-step standard-setting approach, with an analytical first step to determine an 'acceptable risk' that considers all health information, including risk estimation uncertainty, and includes a presumptive limit on MIR of approximately 1-in-10 thousand." (54 FR 38045, September 14, 1989).

In this proposal, the EPA estimated risks based on actual and allowable emissions from the PCWP source category. In determining whether risks are acceptable, the EPA considered all available health information and risk estimation uncertainty, as described above. Table 2 summarizes the risk assessment results for the source category. The results for the PCWP source category indicate that both the actual and allowable inhalation cancer risks to the individual most exposed are below the presumptive limit of acceptability of 100-in-1 million (see discussion of presumptive risk in background section II.A). The residual risk assessment for the PCWP category[26] estimated cancer incidence rate at 0.03 cases per year based on both source category actual and allowable emissions. The low number for the predicted cancer incidence is, in part due to the rural location of many PCWP facilities. The population estimate of 204,000 people exposed to a cancer risk equal to or above 1-in-1 million from source category actual emissions from 170 facilities reflects the rural nature of the source category. Another factor in the low incidence number is that the estimate of people exposed to a cancer risk greater than 10-in-1 million from source category actual emissions drops to 650 people.

The maximum chronic noncancer TOSHI due to inhalation exposures is less than 1 for actual and allowable emissions from the source category. The results of the acute screening analysis showed maximum acute HQs of 4 for acrolein and 2 for formaldehyde emissions. The EPA is proposing to find the acute risks acceptable for the source category considering the conservative assumptions used that err on the side of overestimating acute risk (as discussed in section III.C.7.e).

[26] *Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule,* EPA-HQ-OAR-2016-0243.

Maximum cancer risk due to ingestion exposures estimated using health-protective risk screening assumptions are below 6-in-1 million for the Tier 2 fisher scenario and below 40-in-1 million for the Tier 2 rural gardener exposure scenario. While the Tier 3 screening analyses of mercury exposure due to fish ingestion determined that the maximum HQ for mercury would be less than 2, the EPA is confident that this estimate would be reduced if further refined to incorporate enhanced site-specific analyses such as improved model boundary identification with refined soil/water run-off calculations and use of AERMOD deposition outputs in the TRIM.FaTE model. Considering all of the health risk information and factors discussed above, as well as the uncertainties discussed in section III of this preamble, we propose that the risks posed by emissions from the PCWP source category are acceptable after implementation of the existing MACT standards.

2. Ample Margin of Safety Analysis

As directed by CAA section 112(f)(2), the EPA conducted an analysis to determine if the current emissions standards provide an ample margin of safety to protect public health. Under the ample margin of safety analysis, the EPA considers all health factors evaluated in the risk assessment and evaluates the cost and feasibility of available control technologies and other measures (including the controls, measures, and costs reviewed under the technology review) that could be applied to this source category to further reduce the risks (or potential risks) due to emissions of HAP identified in our risk assessment. Although the EPA is proposing that the risks from this source category are acceptable for both inhalation and multipathway, risk estimates for approximately 200,000 people in the exposed population surrounding 170 facilities producing PCWP or kiln-dried lumber are equal to or above 1-in-1 million, caused primarily by formaldehyde emissions. The EPA considered whether the PCWP MACT standards provide an

ample margin of safety to protect public health. The EPA did not identify methods for further reducing HAP emissions from the PCWP source category that would achieve meaningful risk reductions for purposes of the ample margin of safety analysis. Therefore, the EPA is proposing that the current PCWP standards provide an ample margin of safety to protect public health and revision of the promulgated standards is not required.

3. Adverse Environmental Effect

The EPA does not expect there to be an adverse environmental effect as a result of HAP emissions from this source category and we are proposing that it is not necessary to set a more stringent standard to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect.

C. What are the results and proposed decisions based on the EPA's technology review?

As described in section III.B of this preamble, the EPA's technology review focused on identifying developments in practices, processes, and control technologies for process units subject to standards under the NESHAP that have occurred since 2004 when emission standards were promulgated for the PCWP source category. The EPA reviewed ICR responses and other available information (described in sections II.C and II.D of this preamble) to conduct the technology review. The following process units were included in our review: green rotary dryers, hardboard ovens, pressurized refiners, primary tube dryers, reconstituted wood product presses, softwood veneer dryer heated zones, rotary strand dryers, secondary tube dryers, conveyor strand dryers, fiberboard mat dryers, press predryers, and reconstituted wood product board coolers. The technological basis for the promulgated PCWP NESHAP was use of incineration-based or biofilter add-on controls to reduce HAP emissions. Incineration-based controls include regenerative thermal oxidizers (RTOs), regenerative catalytic oxidizers (RCOs), and incineration of process exhaust in an onsite combustion unit (referred to as "process incineration"). In

addition to the add-on control device compliance options in Table 1B to 40 CFR part 63, subpart DDDD, Table 1A to 40 CFR part 63, subpart DDDD contains production-based compliance options (PBCO) for process units with low emissions due to pollution prevention measures inherent in their process (*e.g.*, low-formaldehyde resins). An emissions averaging compliance option is also available for existing sources in 40 CFR 63.2240(c). One facility demonstrates compliance with the PCWP NESHAP using emissions averaging because none of the other compliance options were feasible for controlling the unique operations at this facility.

Most facilities comply with the PCWP NESHAP using the add-on control options. The EPA observed in our review that many facilities route multiple process units of the same or different types into one shared control system. Facilities use RTOs, RCOs, process incineration, and biofilter control systems as expected. The numerous different process unit and control device combinations that are used in the source category underscore the ongoing utility of the compliance options in Table 1B to 40 CFR part 63, subpart DDDD. The EPA reviewed emissions test data for PCWP process units with add-on controls and concluded that no change in the add-on control emission limits is necessary considering emissions variability. The incremental cost of increasing the required HAP control efficiency from 90-to 95-percent reduction was estimated for new sources to be $670,000 nationwide for a nationwide HAP reduction of 47 tpy ($14,400 per ton of HAP reduced). The EPA is not adopting this option because it was not clearly supported by the emissions data reviewed. The emissions data reflected repeat emissions tests with variability spanning above and below the 95-percent control level, suggesting that maintaining 95-percent HAP control with some compliance margin would be unachievable for the variety of process and control configurations used in the industry.

Further, as discussed below, the HAP inlet concentration of some process units has decreased, making the 90-percent reduction options more challenging to achieve.

Through our review of the ICR data, the EPA found a few facilities currently use the PBCO. Due to a development in the PCWP source category, the EPA expects the PBCO could become more widely used as current add-on air pollution controls for reconstituted wood products presses reach the end of their useful life. In 2008, after the PCWP NESHAP was promulgated, the California Air Resources Board (CARB) finalized an Airborne Toxic Control Measure (ATCM) to reduce formaldehyde emissions from hardwood plywood, MDF, and particleboard. Consistent with the CARB ATCM, in July 2010, Congress passed the Formaldehyde Standards for Composite Wood Products Act, as title VI of Toxic Substances Control Act (TSCA), [15 U.S.C. 2697], requiring the EPA to promulgate a national rule. The EPA subsequently proposed a rule in 2013 to implement TSCA title VI to reduce formaldehyde emissions from composite wood products. The TSCA rule (Formaldehyde Emission Standards for Composite Wood Products, RIN 2070-AJ44) was finalized by the EPA on December 12, 2016 (81 FR 89674), and an implementation rule was finalized on February 7, 2018 (83 FR 5340). Compliance with all aspects of the TSCA rule was required by December 2018. The CARB ATCM and the rule to implement TSCA title VI emphasize the use of low emission resins, including ultra-low-emitting formaldehyde and no added formaldehyde resin systems. As facilities conduct repeat testing, they may find that the inlet concentration of formaldehyde and methanol from their pressing operations has dropped if they are now using a different, lower-HAP resin system to comply with the CARB and TSCA standards. The decrease in inlet concentration may allow for use of the PBCO without an add-on control device providing a compliance option in addition to the current add-on control device compliance option. While the

CARB and TSCA standards are a "development" within the context of CAA section 112(d)(6), these rules do not necessitate revision of the previously-promulgated PCWP emission standards because the promulgated PCWP emission standards already include the PBCO provisions for pollution prevention measures such as lower-HAP resins.

The PCWP NESHAP also contains work practice standards for selected process units in Table 3 to 40 CFR part 63, subpart DDDD; however, the EPA did not identify any developments in practices, processes, or controls for these units beyond those identified in the originally-promulgated PCWP NESHAP. Overall, the EPA's review of the developments in technology for the process units subject to the PCWP NESHAP did not reveal any changes that require revisions to the emission standards. As discussed above, the PCWP rule was promulgated with multiple options for reducing HAP emissions to demonstrate compliance with the standard. The EPA found that facilities are using each type of control system or pollution prevention measure that was anticipated when the PCWP emissions standards were promulgated. However, the EPA did not identify any developments in practices, processes, or controls for these units beyond those identified in the originally-promulgated PCWP NESHAP. Therefore, the EPA proposes that no revisions to the PCWP NESHAP are necessary pursuant to CAA section 112(d)(6). Additional details on our technology review can be found in the memorandum, *Technology Review for the Plywood and Composite Wood Products NESHAP*, which is available in the docket for this action.

D. What other actions are we proposing?

In addition to the proposed actions described above, the EPA is proposing additional revisions to the NESHAP. The EPA is proposing revisions to the SSM provisions of the MACT rule in order to ensure that they are consistent with the Court decision in *Sierra Club v. EPA*, 551

F. 3d 1019 (D.C. Cir. 2008), which vacated two provisions that exempted sources from the requirement to comply with otherwise applicable CAA section 112(d) emission standards during periods of SSM. The EPA is also proposing various other changes, including addition of electronic reporting, addition of a repeat testing requirement, revisions to parameter monitoring requirements, and other technical and editorial changes. Our analyses and proposed changes related to these issues are discussed below.

1. SSM

In its 2008 decision in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), the Court vacated portions of two provisions in the EPA's CAA section 112 regulations governing the emissions of HAP during periods of SSM. Specifically, the Court vacated the SSM exemption contained in 40 CFR 63.6(f)(1) and 40 CFR 63.6(h)(1), holding that under section 302(k) of the CAA, emissions standards or limitations must be continuous in nature and that the SSM exemption violates the CAA's requirement that some section 112 standards apply continuously.

The EPA is proposing the elimination of the SSM exemption in this rule which appears at 40 CFR 63.2250. Consistent with *Sierra Club v. EPA,* the EPA is proposing standards in this rule that apply at all times. The EPA is also proposing several revisions to Table 10 (the General Provisions Applicability Table) as is explained in more detail below. For example, the EPA is proposing to eliminate the incorporation of the General Provisions' requirement that the source develop an SSM plan. The EPA is also proposing to eliminate and revise certain recordkeeping and reporting requirements related to the SSM exemption as further described below. As discussed in section IV.E of this preamble, facilities will have 6 months (180 days) after the effective date of the final rule to transition from use of the SSM exemption to compliance without the exemption beginning on the 181st day after the effective date of the amendments. A

5th column to Table 10 of 40 CFR part 63, subpart DDDD was added to clearly indicate which requirements apply before, and then on and after the date 181 days after the effective date. See section IV.E for more discussion of the compliance date.

The EPA has attempted to ensure that the provisions we are proposing to eliminate are inappropriate, unnecessary, or redundant in the absence of the SSM exemption. The EPA is specifically seeking comment on whether we have successfully done so.

In proposing the standards in this rule, the EPA has taken into account startup and shutdown periods and, for the reasons explained below, has proposed alternate standards for specific periods. The EPA collected information with the PCWP ICR to use in determining whether applying the standards applicable under normal operations would be problematic for PCWP facilities during startup and shutdown. Based on the information collected, facilities can meet the PCWP compliance options, operating requirements, and work practices at all times with two exceptions during periods of startup and shutdown (discussed further below). Facilities operating control systems generally operate the control systems while the process unit(s) controlled are started up and shutdown. For example, RTOs and RCOs are warmed to their operating temperature set points using auxiliary fuel before the process unit(s) controlled startup and the oxidizers continue to maintain their temperature until the process unit(s) controlled shutdown. Biofilters operate within a biofilter bed temperature range that will be more easily achieved during startup and shutdown with changes in biofilter bed temperature operating range discussed in section IV.D.

The two situations where standards for normal operation cannot be met during startup and shutdown are during safety-related shutdowns and pressurized refiner startups and shutdowns. The EPA is proposing work practice standards in Table 3 to 40 CFR part 63, subpart

DDDD to apply during these times to ensure that a CAA section 112 standard applies continuously. Work practices are appropriate during safety-related shutdowns and pressurized refiner startup/shutdown because it is not technically feasible to capture and route emissions to a control device during these periods, nor is it technically or economically feasible to measure emissions during the brief periods when these situations occur (*i.e.*, less than the 1-hour test runs or 3 hours required for a full test). It is particularly infeasible to measure emissions from safety-related shutdowns because these shutdowns are unplanned.

Safety-related shutdowns differ from routine shutdowns that allow facilities to continue routing process unit emissions to the control device until the process unit is shut down. Safety-related shutdowns occur often enough that they are also distinguished from malfunctions which are, by definition, infrequent. In addition, the PCWP process shuts down when these events are triggered. Safety-related shutdowns must occur rapidly in the event of unsafe conditions such as a suspected fire in a process unit heating flammable wood material. When unsafe conditions are detected, facilities must act quickly to shut off fuel flow (or indirect process heat) to the system, cease addition of raw materials (*e.g.*, wood furnish, resin) to the process units, purge wood material and gases from the process unit, and isolate equipment to prevent loss of property or life and protect workers from injury. Because it is unsafe to continue to route process gases to the control system, the control system will be bypassed, in many cases automatically through a system of interlocks designed to prevent dangerous conditions from occurring. The EPA is proposing to define "safety-related shutdowns" in 40 CFR 63.2292, and to add a work practice for these shutdown events. The proposed work practice requires facilities to follow documented site-specific procedures such as use of automated controls or other measures developed to protect workers and equipment to ensure that the flow of raw materials (such as furnish or resin) and

fuel or process heat (as applicable) ceases and that material is removed from the process unit(s) as expeditiously as possible given the system design. These actions are taken by all (including the best-performing) facilities when safety-related shutdowns occur.

Pressurized refiners typically operate in MDF and dry-process hardboard mills where they discharge refined furnish and exhaust gases from refining directly into a primary tube dryer. Pressurized refiners are unable to vent through the dryer to the control system (*i.e.*, the dryer control system) for a brief time after they are initially fed wood material during startup or as wood material clears the refiner during shutdown because they are not producing useable furnish suitable for drying. During this time, instead of the pressurized refiner output being discharged into the dryer, exhaust is vented to the atmosphere and the wood is directed to storage for recycling back into the refining process once it is running steadily. Information from the PCWP industry indicates that no resin is mixed with the off-specification material and that the time periods are short (*i.e.*, no more than 15 minutes) before the pressurized refiner begins to discharge wood furnish and exhaust through the dryer. Information collected through the ICR indicates a range of pressurized refiner startup times before wood furnish is introduced into the system (*e.g.*, up to 4 hours) and that up to 45 minutes is required to shut down the pressurized refiner including time after the wood clears the system. Hence, the time when off-specification material is produced (when emissions are beginning to be generated during startup or diminishing during shutdown) is only a fraction of the pressurized refiner startup and shutdown time. Based on this information, the EPA is proposing a work practice requirement to apply during pressurized refiner startup and shutdown that limits the amount of time (and, thus, emissions) when wood is being processed through the system while exhaust is not routed through the dryer to its control system. The proposed work practice requires facilities to route exhaust

gases from the pressurized refiner to its control system no later than 15 minutes after furnish is fed to the pressurized refiner when starting up and no more than 15 minutes after furnish ceases to be fed to the pressurized refiner when shutting down. This practice is consistent with how the best-performing facilities complete startup and shutdown of pressurized refiners.

The new definition in 40 CFR 63.2292 and the new work practice standards in Table 3 of 40 CFR part 63, subpart DDDD are designed to address safety-related shutdowns and refiner startup/shutdown periods. Facilities have ample profit-incentive to keep the periods when these work practice standards will be in effect as short as possible because they are unable to produce usable product during safety-related shutdowns or pressurized refiner startup/shutdown periods.

Periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations. Malfunctions, in contrast, are neither predictable nor routine. Instead they are, by definition, sudden, infrequent, and not reasonably preventable failures of emissions control, process, or monitoring equipment. (40 CFR 63.2) (Definition of malfunction). The EPA interprets CAA section 112 as not requiring emissions that occur during periods of malfunction to be factored into development of CAA section 112 standards and this reading has been upheld as reasonable by the Court in *U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 606-610 (2016). Under section CAA 112, emissions standards for new sources must be no less stringent than the level "achieved" by the best controlled similar source and for existing sources generally must be no less stringent than the average emission limitation "achieved" by the best performing 12 percent of sources in the category. There is nothing in section CAA 112 that directs the Agency to consider malfunctions in determining the level "achieved" by the best performing sources when setting emission standards. As the Court has recognized, the phrase "average emissions limitation achieved by the best performing 12 percent of" sources "says nothing about

how the performance of the best units is to be calculated." *Nat'l Ass'n of Clean Water Agencies v. EPA*, 734 F.3d 1115, 1141 (D.C. Cir. 2013). While the EPA accounts for variability in setting emissions standards, nothing in CAA section 112 requires the Agency to consider malfunctions as part of that analysis. The EPA is not required to treat a malfunction in the same manner as the type of variation in performance that occurs during routine operations of a source. A malfunction is a failure of the source to perform in a "normal or usual manner" and no statutory language compels the EPA to consider such events in setting CAA section 112 standards.

As the Court recognized in *U.S. Sugar Corp*, accounting for malfunctions in setting standards would be difficult, if not impossible, given the myriad different types of malfunctions that can occur across all sources in the category and given the difficulties associated with predicting or accounting for the frequency, degree, and duration of various malfunctions that might occur. *Id*. at 608 ("the EPA would have to conceive of a standard that could apply equally to the wide range of possible boiler malfunctions, ranging from an explosion to minor mechanical defects. Any possible standard is likely to be hopelessly generic to govern such a wide array of circumstances"). As such, the performance of units that are malfunctioning is not "reasonably" foreseeable. See, *e.g.*, *Sierra Club v. EPA*, 167 F.3d 658, 662 (D.C. Cir. 1999) ("The EPA typically has wide latitude in determining the extent of data-gathering necessary to solve a problem. We generally defer to an agency's decision to proceed on the basis of imperfect scientific information, rather than to 'invest the resources to conduct the perfect study.'") See also, *Weyerhaeuser v. Costle*, 590 F.2d 1011, 1058 (D.C. Cir. 1978) ("In the nature of things, no general limit, individual permit, or even any upset provision can anticipate all upset situations. After a certain point, the transgression of regulatory limits caused by 'uncontrollable acts of third parties,' such as strikes, sabotage, operator intoxication or insanity, and a variety of other

eventualities, must be a matter for the administrative exercise of case-by-case enforcement discretion, not for specification in advance by regulation."). In addition, emissions during a malfunction event can be significantly higher than emissions at any other time of source operation. For example, if an air pollution control device with 99-percent removal goes off-line as a result of a malfunction (as might happen if, for example, the bags in a baghouse catch fire) and the emission unit is a steady state type unit that would take days to shut down, the source would go from 99-percent control to zero control until the control device was repaired. The source's emissions during the malfunction would be 100 times higher than during normal operations. As such, the emissions over a 4-day malfunction period would exceed the annual emissions of the source during normal operations. As this example illustrates, accounting for malfunctions could lead to standards that are not reflective of (and significantly less stringent than) levels that are achieved by a well-performing non-malfunctioning source. It is reasonable to interpret CAA section 112 to avoid such a result. The EPA's approach to malfunctions is consistent with CAA section 112 and is a reasonable interpretation of the statute.

Although no statutory language compels the EPA to set standards for malfunctions, the EPA has the discretion to do so where feasible. For example, in the Petroleum Refinery Sector RTR, the EPA established a work practice standard for unique types of malfunction that result in releases from pressure relief devices or emergency flaring events because the EPA had information to determine that such work practices reflected the level of control that applies to the best performers. 80 FR 75178, 75211-14 (December 1, 2015). The EPA will consider whether circumstances warrant setting standards for a particular type of malfunction and, if so, whether the EPA has sufficient information to identify the relevant best performing sources and establish

a standard for such malfunctions. The EPA also encourages commenters to provide any such information.

In the event that a source fails to comply with the applicable CAA section 112(d) standards as a result of a malfunction event, the EPA would determine an appropriate response based on, among other things, the good faith efforts of the source to minimize emissions during malfunction periods, including preventative and corrective actions, as well as root cause analyses to ascertain and rectify excess emissions. The EPA would also consider whether the source's failure to comply with the CAA section 112(d) standard was, in fact, sudden, infrequent, not reasonably preventable, and was not instead caused, in part, by poor maintenance or careless operation per 40 CFR 63.2 (Definition of malfunction).

If the EPA determines in a particular case that an enforcement action against a source for violation of an emission standard is warranted, the source can raise any and all defenses in that enforcement action and the federal district court will determine what, if any, relief is appropriate. The same is true for citizen enforcement actions. Similarly, the presiding officer in an administrative proceeding can consider any defense raised and determine whether administrative penalties are appropriate.

In summary, the EPA interpretation of the CAA and, in particular, section 112, is reasonable and encourages practices that will avoid malfunctions. Administrative and judicial procedures for addressing exceedances of the standards fully recognize that violations may occur despite good faith efforts to comply and can accommodate those situations. *U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 606-610 (2016).

a. General Duty (40 CFR 63.2250)

The EPA is proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.6(e)(1) and (2) by redesignating it as 40 CFR 63.6(e)(1)(i) and changing the "yes" in column 4 to a "no" in column 5 which was added to specify requirements on and after the date 181 days after the effective date of the final amendments. Section 63.6(e)(1)(i) describes the general duty to minimize emissions. Some of the language in that section is no longer necessary or appropriate in light of the elimination of the SSM exemption. The EPA is proposing instead to add general duty regulatory text at 40 CFR 63.2250 that reflects the general duty to minimize emissions while eliminating the reference to periods covered by an SSM exemption. The current language in 40 CFR 63.6(e)(1)(i) characterizes what the general duty entails during periods of SSM. With the elimination of the SSM exemption, there is no need to differentiate between normal operations, startup and shutdown, and malfunction events in describing the general duty. Therefore, the language the EPA is proposing for 40 CFR 63.2250 eliminates that language from 40 CFR 63.6(e)(1).

The EPA is also proposing to revise the General Provisions table (Table 10) by adding an entry for 40 CFR 63.6(e)(1)(ii) and including a "no" in column 5. Section 63.6(e)(1)(ii) imposes requirements that are not necessary with the elimination of the SSM exemption or are redundant with the general duty requirement being added at 40 CFR 63.2250.

b. SSM Plan

The EPA is proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.6(e)(3) by changing the "yes" in column 4 to a "no" in column 5. Generally, the paragraphs under 40 CFR 63.6(e)(3) require development of an SSM plan and specify SSM recordkeeping and reporting requirements related to the SSM plan. As noted, the EPA is proposing to remove the SSM exemptions. Therefore, affected units will be subject to an emission standard during

such events. The applicability of a standard during such events will ensure that sources have ample incentive to plan for and achieve compliance and, thus, the SSM plan requirements are no longer necessary.

c. Compliance with Standards

The EPA is proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.6(f)(1) by changing the "yes" in column 4 to a "no" in column 5. The current language of 40 CFR 63.6(f)(1) exempts sources from non-opacity standards during periods of SSM. As discussed above, the Court in *Sierra Club* vacated the exemptions contained in this provision and held that the CAA requires that some CAA section 112 standard apply continuously. Consistent with *Sierra Club,* the EPA is proposing to revise standards in this rule to apply at all times.

The EPA is proposing to revise the General Provisions table **(**Table 10**)** entry for 40 CFR 63.6(h)(1) through (9) by redesignating it as 40 CFR 63.6(h)(1) and changing the "NA" in column 4 to a "no" in column 5. The current language of 40 CFR 63.6(h)(1) exempts sources from opacity standards during periods of SSM. As discussed above, the Court in *Sierra Club* vacated the exemptions contained in this provision and held that the CAA requires that some CAA section 112 standards apply continuously. Consistent with *Sierra Club,* the EPA is proposing to revise standards in this rule to apply at all times.

d. Performance Testing (40 CFR 63.2262)

The EPA is proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.7(e)(1) by changing the "yes" in column 4 to a "no" in column 5. Section 63.7(e)(1) describes performance testing requirements. The EPA is instead proposing to add a performance testing requirement at 40 CFR 63.2262(a)-(b). The performance testing requirements the EPA is proposing to add differ from the General Provisions performance testing provisions in several respects. The regulatory text does not include the language in 40 CFR 63.7(e)(1) that restated the

SSM exemption. The proposed performance testing provisions remove reference to 40 CFR 63.7(e)(1), reiterate the requirement that was already included in the PCWP rule to conduct emissions tests under representative operating conditions, and clarify that representative operating conditions excludes periods of startup and shutdown. As in 40 CFR 63.7(e)(1), performance tests conducted under this subpart should not be conducted during malfunctions because conditions during malfunctions are often not representative of normal operating conditions. The EPA is proposing to add language that requires the owner or operator to record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions are representative. Section 63.7(e) requires that the owner or operator make available to the Administrator such records "as may be necessary to determine the condition of the performance test" upon request but does not specifically require the information to be recorded. The regulatory text the EPA is proposing to add to this provision builds on that requirement and makes explicit the requirement to record the information.

The definition of "representative operating conditions" in 40 CFR 63.2292 is also proposed to be clarified to exclude periods of startup and shutdown. Representative operating conditions include a range of operating conditions under which the process unit and control device typically operate and are not limited to conditions of optimal performance of the process unit and control device.

e. Monitoring

The EPA is proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.8(c)(1)(i) and (iii) by changing the "yes" in column 4 to a "no" in column 5. The cross-references to the general duty and SSM plan requirements in those subparagraphs are not

necessary in light of other requirements of 40 CFR 63.8 that require good air pollution control practices (40 CFR 63.8(c)(1)) and that set out the requirements of a quality control program for monitoring equipment (40 CFR 63.8(d)).

The EPA is proposing to revise the General Provisions table (Table 10) by adding an entry for 40 CFR 63.8(d)(3) and including a "no" in column 5. The final sentence in 40 CFR 63.8(d)(3) refers to the General Provisions' SSM plan requirement which is no longer applicable. The EPA is proposing to add to the rule at 40 CFR 63.2282(f) text that is identical to 40 CFR 63.8(d)(3) except that the final sentence is replaced with the following sentence: "The program of corrective action should be included in the plan required under 40 CFR 63.8(d)(2)."

f. Recordkeeping (40 CFR 63.2282)

The EPA is proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.10(b)(2)(i) through (iv) by redesignating it as 40 CFR 63.10(b)(2)(i) and changing the "yes" in column 4 to a "no" in column 5. Section 63.10(b)(2)(i) describes the recordkeeping requirements during startup and shutdown. The EPA is instead proposing to add recordkeeping requirements to 40 CFR 63.2282(a). When a source is subject to a different standard during startup and shutdown, it will be important to know when such startup and shutdown periods begin and end to determine compliance with the appropriate standard. Thus, the EPA is proposing to add language to 40 CFR 63.2282(a) requiring that sources subject to an emission standard during startup or shutdown that differs from the emission standard that applies at all other times must report the date, time, and duration of such periods.

The EPA is proposing to revise the General Provisions table (Table 10) by adding an entry for 40 CFR 63.10(b)(2)(ii) and including a "no" in column 5. Section 63.10(b)(2)(ii) describes the recordkeeping requirements during a malfunction. The EPA is proposing to add

such requirements to 40 CFR 63.2282(a). The regulatory text the EPA is proposing to add differs from the General Provisions it is replacing in that the General Provisions requires the creation and retention of a record of the occurrence and duration of each malfunction of process, air pollution control, and monitoring equipment. The EPA is proposing that this requirement apply to any failure to meet an applicable standard and is requiring that the source record the date, time, and duration of the failure rather than the "occurrence." The EPA is also proposing to add to 40 CFR 63.2282(a) a requirement that sources keep records that include a list of the affected source or equipment and actions taken to minimize emissions, an estimate of the quantity of each regulated pollutant emitted over the standard for which the source failed to meet the standard, and a description of the method used to estimate the emissions. Examples of such methods would include product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The EPA is proposing to require that sources keep records of this information to ensure that there is adequate information to allow the EPA to determine the severity of any failure to meet a standard, and to provide data that may document how the source met the general duty to minimize emissions when the source has failed to meet an applicable standard.

The EPA is proposing to revise the General Provisions table (Table 10) by adding an entry for 40 CFR 63.10(b)(2)(iv) and including a "no" in column 5. When applicable, the provision requires sources to record actions taken during SSM events when actions were inconsistent with their SSM plan. The requirement is no longer appropriate because SSM plans will no longer be required. The requirement previously applicable under 40 CFR 63.10(b)(2)(iv)(B) to record actions to minimize emissions and record corrective actions is now applicable by reference to 40 CFR 63.2282(a).

The EPA is proposing to revise the General Provisions table (Table 10) by adding 40 CFR 63.10(b)(2)(v) to the entry for 40 CFR 63.10(b)(2)(iv) and including a "no" in column 5. When applicable, the provision requires sources to record actions taken during SSM events to show that actions taken were consistent with their SSM plan. The requirement is no longer appropriate because SSM plans will no longer be required.

The EPA is proposing to revise the General Provisions table (Table 10) by adding an entry for 40 CFR 63.10(c)(15) and including a "no" in column 5. The EPA is proposing that 40 CFR 63.10(c)(15) no longer apply. When applicable, the provision allows an owner or operator to use the affected source's SSM plan or records kept to satisfy the recordkeeping requirements of the SSM plan, specified in 40 CFR 63.6(e), to also satisfy the requirements of 40 CFR 63.10(c)(10) through (12). The EPA is proposing to eliminate this requirement because SSM plans would no longer be required, and, therefore, 40 CFR 63.10(c)(15) no longer serves any useful purpose for affected units.

g. Reporting (40 CFR 63.2281)

The EPA is proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.10(d)(5) by redesignating it as 40 CFR 63.10(d)(5)(i) and changing the "yes" in column 4 to a "no" in column 5. Section 63.10(d)(5)(i) describes the reporting requirements for startups, shutdowns, and malfunctions. To replace the General Provisions reporting requirement, the EPA is proposing to add reporting requirements to 40 CFR 63.2281(d) and (e). The replacement language differs from the General Provisions requirement in that it eliminates periodic SSM reports as a stand-alone report. The EPA is proposing language that requires sources that fail to meet an applicable standard at any time to report the information concerning such events in the semiannual compliance report already required under this rule. The EPA is proposing that the

report must contain the number, date, time, duration, and the cause of such events (including unknown cause, if applicable), a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions. Examples of such methods would include product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The EPA is proposing this requirement to ensure that there is adequate information to determine compliance, to allow the EPA to determine the severity of the failure to meet an applicable standard, and to provide data that may document how the source met the general duty to minimize emissions during a failure to meet an applicable standard.

The EPA will no longer require owners or operators to determine whether actions taken to correct a malfunction are consistent with an SSM plan, because plans would no longer be required. The proposed amendments, therefore, eliminate the cross-reference to 40 CFR 63.10(d)(5)(i) that contains the description of the previously required SSM report format and submittal schedule from this section. These specifications are no longer necessary because the events will be reported in otherwise required reports with similar format and submittal requirements.

The EPA is proposing to revise the General Provisions table (Table 10) by adding an entry for 40 CFR 63.10(d)(5)(ii) and including a "no" in column 5. Section 63.10(d)(5)(ii) describes an immediate report for startups, shutdowns, and malfunctions when a source failed to meet an applicable standard but did not follow the SSM plan. The EPA will no longer require owners and operators to report when actions taken during a startup, shutdown, or malfunction were not consistent with an SSM plan, because plans would no longer be required.

2. Electronic Reporting

The EPA is proposing that owners and operators of PCWP facilities submit electronic copies of required performance test reports, performance evaluation reports for continuous monitoring systems (CMS) measuring relative accuracy test audit (RATA) pollutants (*i.e.*, total hydrocarbon monitors), selected notifications, and semiannual reports through the EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI). A description of the electronic data submission process is provided in the memorandum, *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, available in Docket ID No. EPA-HQ-OAR-2016-0243. The proposed rule requires that performance test results collected using test methods that are supported by the EPA's Electronic Reporting Tool (ERT) as listed on the ERT website[27] at the time of the test be submitted in the format generated through the use of the ERT and that other performance test results be submitted in portable document format (PDF) using the attachment module of the ERT. Similarly, performance evaluation results of CMS measuring RATA pollutants that are supported by the ERT at the time of the test must be submitted in the format generated through the use of the ERT and other performance evaluation results be submitted in PDF using the attachment module of the ERT.

For the PCWP semiannual report, the proposed rule requires that owners and operators use the appropriate spreadsheet template to submit information to CEDRI. A draft version of the proposed template for this report is included in the docket for this rulemaking.[28] The EPA

[27] *https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert.*
[28] See *40 CFR Part 63, Subpart DDDD -- Plywood and Composite Wood Products Semiannual Compliance Reporting Spreadsheet Template*, available at Docket ID No. EPA-HQ-OAR-2016-0243.

specifically requests comment on the content, layout, and overall design of the template. In addition, the EPA is proposing to require future initial notifications developed according to 40 CFR 63.2280(b) and notifications of compliance status developed according to 40 CFR 63.2280(d) to be uploaded in CEDRI in a user-specified (*e.g.*, PDF) format.

Additionally, the EPA has identified two broad circumstances in which electronic reporting extensions may be provided. In both circumstances, the decision to accept the claim of needing additional time to report is within the discretion of the Administrator, and reporting should occur as soon as possible. The EPA is providing these potential extensions to protect owners and operators from noncompliance in cases where they cannot successfully submit a report by the reporting deadline for reasons outside of their control. The situation where an extension may be warranted due to outages of the EPA's CDX or CEDRI which precludes an owner or operator from accessing the system and submitting required reports is addressed in 40 CFR 63.2281(k). The situation where an extension may be warranted due to a force majeure event, which is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents an owner or operator from complying with the requirement to submit a report electronically as required by this rule is addressed in 40 CFR 63.2281(l). Examples of such events are acts of nature, acts of war or terrorism, or equipment failure or safety hazards beyond the control of the facility.

The electronic submittal of the reports addressed in this proposed rulemaking will increase the usefulness of the data contained in those reports, is in keeping with current trends in data availability and transparency, will further assist in the protection of public health and the environment, will improve compliance by facilitating the ability of regulated facilities to

demonstrate compliance with requirements and by facilitating the ability of delegated state, local, tribal, and territorial air agencies and the EPA to assess and determine compliance, and will ultimately reduce burden on regulated facilities, delegated air agencies, and the EPA. Electronic reporting also eliminates paper-based, manual processes, thereby saving time and resources, simplifying data entry, eliminating redundancies, minimizing data reporting errors, and providing data quickly and accurately to the affected facilities, air agencies, the EPA, and the public. Moreover, electronic reporting is consistent with the EPA's plan[29] to implement Executive Order 13563 and is in keeping with the EPA's Agency-wide policy[30] developed in response to the White House's Digital Government Strategy.[31] For more information on the benefits of electronic reporting, see the memorandum *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules,* available in Docket ID No. EPA-HQ-OAR-2016-0243.

3. Repeat Emissions Testing

As part of an ongoing effort to improve compliance with various federal air emission regulations, the EPA reviewed the emissions testing requirements of 40 CFR part 63, subpart DDDD, and is proposing to require facilities complying with the standards in Table 1B of 40 CFR part 63, subpart DDDD using an add-on control system other than a biofilter to conduct repeat emissions performance testing every 5 years. Currently, facilities operating add-on

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[29] The EPA's *Final Plan for Periodic Retrospective Reviews*, August 2011. Available at: *https://www.regulations.gov/document?D=EPA-HQ-OA-2011-0156-0154*.

[30] *E-Reporting Policy Statement for EPA Regulations*, September 2013. Available at: *https://www.epa.gov/sites/production/files/2016-03/documents/epa-ereporting-policy-statement-2013-09-30.pdf*.

[31] *Digital Government: Building a 21st Century Platform to Better Serve the American People, May 2012*. Available at: *https://obamawhitehouse.archives.gov/sites/default/files/omb/egov/digital-government/digital-government.html*.

controls are required to conduct an initial performance test by the date specified in 40 CFR 63.2261(a). In addition to the initial performance test, process units controlled by biofilters are already required by the PCWP NESHAP to conduct repeat performance testing every 2 years. Periodic performance tests for all types of control systems are already required by permitting authorities for many facilities. Further, the EPA believes that requiring repeat performance tests will help to ensure that control systems are properly maintained over time. As proposed in Table 7 to 40 CFR part 63, subpart DDDD (row 7) the first of the repeat performance tests would be required to be conducted within 3 years of the effective date of the revised standards or within 60 months following the previous performance test, whichever is later, and thereafter within 5 years (60 months) following the previous performance test. Section IV.E of this preamble provides more information on compliance dates. We specifically request comment on the proposed repeat testing requirements.

4. Biofilter Bed Temperature

Facilities using a biofilter to comply with the PCWP NESHAP must monitor biofilter bed temperature and maintain the 24-hour block biofilter bed temperature within the range established during performance testing showing compliance with the emission limits. The upper and lower limits of the biofilter bed temperature are currently required to be established as the highest and lowest 15-minute average bed temperatures, respectively, during the three test runs. Facilities may conduct multiple performance tests to expand the biofilter bed operating temperature range. See 40 CFR 63.2262(m).

The EPA has become aware that multiple facilities are having difficulty with the PCWP biofilter bed temperature monitoring requirements as originally promulgated. Biofilter bed temperature is affected by ambient temperature. Diurnal and seasonal ambient temperature

fluctuations do not necessarily impact the ability of the biofilter to reduce HAP emissions because biofilters reduce HAP (*e.g.*, formaldehyde) emissions over a wide range of bed temperatures. Facilities have indicated they are not able to schedule performance tests on the warmest and coolest days of each season because test firms must plan and mobilize for tests weeks in advance and facilities must notify their delegated authority 60 days before conducting a performance test. For example, facilities may schedule a test in the winter with the intent of measuring emissions during the coldest conditions in which a biofilter performs, only to find that the weather changes on the test date to a warmer than expected ambient temperature. In consideration of this issue, the EPA reviewed biofilter temperature monitoring data, semiannual compliance reports, and test data showing that formaldehyde reductions in compliance with emission standards were achieved at a wide range of biofilter bed temperatures. The EPA is proposing to amend 40 CFR 63.2262(m)(1) to add a 5-percent variability margin to the biofilter bed temperature upper and lower limits established during emissions testing. A 5-percent variability margin addresses the issues observed in the 24-hour block average biofilter temperature monitoring data reviewed. The EPA maintains that the currently-required 24-hour block averaging time is appropriate to monitor for harsh swings in biofilter bed temperature that could impact the viability of the microbial population. The 5-percent variability margin provides flexibility needed to account for small variations in biofilter bed temperature unlikely to impact the microbial population.

While the proposed regulatory language does not explicitly state that facilities can use the 5-percent variability margin to expand the range of the biofilter bed temperature limit established though previously conducted performance tests, the EPA anticipates that facilities currently having difficulty maintaining the biofilter bed temperature limits may wish to adjust their

temperature limits. As originally promulgated, 40 CFR 63.2262(m)(1) states that facilities may base their biofilter bed temperature range on values recorded during previous performance tests provided that the data used to establish the temperature ranges have been obtained using the required test methods; and that facilities using data from previous performance tests must certify that the biofilter and associated process unit(s) have not been modified since the test. This provision (if met) clarifies that facilities can adjust their previously established biofilter temperature range to include the 5-percent variability margin, if desired. Facilities are encouraged to demonstrate the broadest limits of their compliant temperature operating parameters with their regular performance tests.

5. Thermocouple Calibration

Facilities with controlled sources subject to the PCWP NESHAP that use regenerative thermal or catalytic oxidizers to comply with the standard are required to establish a minimum operating temperature during performance testing then maintain a 3-hour block average firebox temperature above the minimum temperature established during the performance test to demonstrate ongoing compliance. Facilities with controlled sources subject to the PCWP NESHAP that use biofilters to comply with the standard are required to establish an operating temperature range during performance testing then maintain a 24-hour block average temperature within the temperature range established during the performance test to demonstrate ongoing compliance. (40 CFR part 63, subpart DDDD, Table 2). Facilities with dry rotary dryers are required to maintain their 24-hour block average inlet dryer temperature less than 600 degrees Fahrenheit. (40 CFR part 63, subpart DDDD, Table 3). Thermocouples are used to measure the temperature in the firebox, the biofilter, and the dry rotary dryer. At 40 CFR 63.2269(b)(4), the PCWP NESHAP currently requires conducting an electronic calibration of the

temperature monitoring device at least semiannually according to the procedures in the manufacturer's owner's manual. Facilities subject to the standard have explained to the EPA that they are not aware of a thermocouple manufacturer that provides procedures or protocols for conducting electronic calibration of thermocouples. Facilities have reported that since they cannot calibrate their thermocouples, the alternative is to replace them and requested that an alternative approach to the current requirement in 40 CFR 63.2269(b)(4) be considered.

The EPA is proposing to modify 40 CFR 63.2269(b)(4) to allow multiple alternative approaches to thermocouple calibration. The first alternative would allow use of a National Institute of Standards and Technology (NIST) traceable temperature measurement device or simulator to confirm the accuracy of any thermocouple placed into use for at least one semi-annual period, where the accuracy of the temperature measurement must be within 2.5 percent of the temperature measured by the NIST traceable device or 5°F, whichever is greater. The second alternative would be to have the thermocouple manufacturer certify the electrical properties of the thermocouple. The third alternative would codify the common practice of replacing thermocouples every 6 months. The fourth alternative would be to permanently install a redundant temperature sensor as close as practicable to the process temperature sensor. The redundant sensors must read within 30°F of each other for thermal and catalytic oxidizers, within 5°F for biofilters, and within 20°F for dry rotary dryers. The EPA plans to maintain the option of allowing facilities to follow calibration procedures developed by the thermocouple manufacturer when thermocouple manufacturers develop calibration procedures for their products.

6. Non-HAP Coating Definition

The PCWP NESHAP requires use of "non-HAP coatings" for "Group 1 miscellaneous coating operations" as defined in 40 CFR 63.2292. As defined, PCWP non-HAP coatings

exclude coatings with 0.1 percent or more (by mass) of carcinogenic HAP. The current "non-HAP coating" definition in 40 CFR 63.2292 references Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) which was amended (77 FR 17574, March 26, 2012) and no longer readily defines which compounds are carcinogens. The EPA is proposing to replace the references to OSHA-defined carcinogens and 29 CFR 1910.1200(d)(4) in the PCWP "non-HAP coating" definition with a reference to a new appendix B to 40 CFR part 63, subpart DDDD, that lists HAP that must be below 0.1 percent by mass for a PCWP coating to be considered as non-HAP coating. The HAP listed in the proposed appendix B to 40 CFR part 63, subpart DDDD, were categorized in the EPA's *Prioritized Chronic Dose- Response Values for Screening Risk Assessments* (dated May 9, 2014) as a "human carcinogen," "probable human carcinogen," or "possible human carcinogen" according to *The Risk Assessment Guidelines of 1986* (EPA/ 600/8–87/045, August 1987),[32] or as "carcinogenic to humans," "likely to be carcinogenic to humans," or with "suggestive evidence of carcinogenic potential" according to the *Guidelines for Carcinogen Risk Assessment* (EPA/630/P–03/001F, March 2005).

7. Technical and Editorial Changes

The following lists additional proposed changes that address technical and editorial corrections:

- The clarifying reference to "SSM plans" in 40 CFR 63.2252 was removed because SSM plans will no longer be applicable;

[32] *https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants.*

- The redundant reference in 40 CFR 63.2281(c)(6) for submittal of performance test results with the compliance report was eliminated because performance test results will be required to be electronically reported;
- The EPA revised 40 CFR 63.2281(d)(2) and added language to 40 CFR 63.2281(e)(12)-(13) to makes these sections more consistent to facilitate electronic reporting;
- A provision stating that the EPA retains authority to approve alternatives to electronic reporting was added to 40 CFR 63.2291(c)(5);
- Cross-references to the 40 CFR part 60 appendices containing test methods were updated in Table 4 of the rule;
- Cross-references were updated throughout the rule, as needed, to match the proposed changes;
- Cross-references to 40 CFR 63.14 to remove outdated paragraph references were updated;
- The equation number cross-referenced in the definition of "MSF" was corrected; and
- The cross-reference in 40 CFR 63.2290 to include all sections of the General Provisions was updated.

E. What compliance dates are we proposing?

The EPA is proposing that existing affected sources and other affected sources that commenced construction or reconstruction on or before [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**] must comply with all of the amendments 6 months (180 days) after the effective date of the final rule.[33] For existing sources, the EPA is proposing

[33] The final action is not expected to be a "major rule" as defined by 5 U.S.C. 804(2), so the effective date of the final rule will be the promulgation date as specified in CAA section 112(d)(10).

changes that would impact ongoing compliance requirements for 40 CFR part 63, subpart DDDD. As discussed elsewhere in this preamble, the EPA is proposing to change the requirements for SSM by removing the exemption from the requirements to meet the standard during SSM periods and by removing the requirement to develop and implement an SSM plan. The EPA is also proposing addition of electronic reporting requirements that will require use of a semiannual reporting template once the template has been available on the CEDRI website (*https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri*) for 6 months. The EPA's experience with similar industries shows that this sort of regulated facility generally requires a time-period of 180 days to read and understand the amended rule requirements; to evaluate their operations to ensure that they can meet the standards during periods of startup and shutdown as defined in the rule and make any necessary adjustments; and to update their operations to reflect the revised requirements. From our assessment of the time frame needed for compliance with the revised requirements, the EPA considers a period of 180 days to be the most expeditious compliance period practicable, and, thus, is proposing that existing affected sources be in compliance with this regulation's revised requirements within 180 days of the regulation's effective date. All existing affected facilities would have to continue to meet the current requirements of this NESHAP until the applicable compliance date of the amended rule. Affected sources that commence construction or reconstruction after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**] must comply with all requirements of the subpart, including the amendments being proposed, no later than the effective date of the final rule or upon initial startup, whichever is later.

Also, the EPA is proposing new requirements to conduct repeat performance testing every 5 years for facilities using an add-on control system other than a biofilter (see section

IV.D.3 of this preamble). Establishing a compliance date earlier than 3 years for the first repeat performance test can cause scheduling issues as affected sources compete for a limited number of testing contractors. Considering these scheduling issues, the first of the repeat performance tests would be required to be conducted within 3 years after the effective date of the revised standards, or within 60 months following the previous performance test, whichever is later, and thereafter within 5 years (60 months) following the previous performance test. Thus, facilities with relatively new affected sources that recently conducted the initial performance test by the date specified in 40 CFR 63.2261(a) or facilities that were required by their delegated authorities to conduct a performance test to show ongoing compliance with the PCWP standards would have 5 years (60 months) from the previous test before being required to conduct the first of the repeat tests required by the proposed amendment to add repeat testing.

The EPA specifically seeks comment on whether the compliance times described in this section provide enough time for owners and operators to comply with these proposed amendments, and if the proposed time window is not adequate, we request that commenters provide an explanation of specific actions that would need to be undertaken to comply with the proposed amended requirements and the time needed to make the adjustments for compliance with any of the revised requirements. The EPA notes that information provided may result in changes to the proposed compliance date.

V. Summary of Cost, Environmental, and Economic Impacts

A. What are the affected sources?

The EPA has identified 230 facilities that are currently operating and subject to the PCWP NESHAP. This includes 109 facilities manufacturing one or more PCWP products (*e.g.*, plywood, veneer, particleboard, OSB, hardboard, fiberboard, MDF, engineered wood products)

and 121 facilities that produce kiln-dried lumber. Sixteen facilities produce PCWP products and kiln-dried lumber. Information on currently operational facilities is included in the *Technology Review for the Plywood and Composite Wood Products NESHAP*, available in the docket for this action. In addition, the EPA is aware of 13 greenfield facilities (four PCWP and nine kiln-dried lumber mills) that recently commenced construction as major sources of HAP emissions. The EPA is projecting that two new OSB mills will be constructed as major sources within the next 5 years, and that existing facilities will add or replace process units during this same time frame. More details on our projections of new sources are available in *Projections of the Number of New and Reconstructed Sources for the Subpart DDDD Technology Review,* in the docket for this action.

B. What are the air quality impacts?

The nationwide baseline HAP emissions from the 230 facilities in the PCWP source category are estimated to be 7,600 tons/year. Emissions of the six compounds defined as "total HAP" in the PCWP NESHAP (acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde) make up 96 percent of the nationwide emissions. The proposed amendments include removal of the SSM exemption and addition of repeat emissions testing for controls other than biofilters (which are already require repeat tests). Although the EPA is unable to quantify the emission reduction associated with these changes, we expect that emissions will be reduced by requiring facilities to meet the applicable standard during periods of SSM and that the repeat emissions testing requirements will encourage operation of add-on controls to achieve optimum performance. The EPA is not proposing other revisions to the emission limits that would impact emissions, so there are no quantifiable air quality impacts resulting from the proposed amendments.

C. What are the cost impacts?

No capital costs are estimated to be incurred to comply with the proposed amendments. The costs associated with the proposed amendments are related to recordkeeping and reporting labor costs and repeat performance testing. Because repeat performance testing would be required every 5 years, costs are estimated and summarized over a 5-year period. The nationwide cost of the proposed amendments is estimated to include a one-time cost of $1.3 million for facilities to review the revised rule and make record systems adjustments and a cost of $3.5 million every 5 years for repeat emissions testing. These costs are in 2018 dollars. Another metric for presenting the one-time costs is as a present value (PV), which is a technique that converts a stream of costs over time into a one-time estimate for the present year or other year. The EPA estimates that the PV of costs for this proposal is $5.6 million at a discount rate of 7 percent and $6.9 million at a discount rate of 3 percent. In addition, the EPA presents these costs as an equivalent annualized value (EAV) in order to provide an estimate of annual costs consistent with the present value. The EAV for this proposal is estimated to be $0.9 million at a discount rate of 7 percent and $1.0 million at a discount rate of 3 percent. The PV and EAV cost estimates are in 2016 dollars in part to conform to Executive Order 13771 requirements. For further information on the costs associated with the proposed amendments, see the memorandum, *Cost, Environmental, and Energy Impacts of Regulatory Options for Subpart DDDD*, and the memorandum, *Economic Impact and Small Business Analysis for the Proposed Plywood and Composite Wood Products Risk and Technology Review (RTR) NESHAP*, both available in the docket for this action.

D. What are the economic impacts?

The EPA conducted an economic impact analysis for this proposal, as detailed in the memorandum titled *Economic Impact and Small Business Analysis for the Proposed Plywood*

and Composite Wood Risk and Technology Review (RTR) NESHAP, which is available in the docket for this action. The economic impacts of the proposal are calculated as the percentage of annualized costs incurred by affected ultimate parent owners to their revenues. This ratio provides a measure of the direct economic impact to ultimate parent owners of PCWP facilities while presuming no impact on consumers. The EPA estimates that none of the ultimate parent owners affected by this proposal will incur annualized costs of 1.0 percent or greater of their revenues. Thus, these economic impacts are low for affected companies and the industries impacted by this proposal, and there will not be substantial impacts in the markets for affected products.

E. What are the benefits?

The EPA is not proposing changes to emissions limits, and estimates the proposed changes (*i.e.,* changes to SSM, recordkeeping, reporting, and monitoring) are not economically significant. Because these proposed amendments are not considered economically significant, as defined by Executive Order 12866, and because no emissions reductions were estimated, the EPA did not estimate any benefits from reducing emissions.

VI. Request for Comments

The EPA solicits comments on this proposed action. In addition to general comments on this proposed action, the EPA is also interested in additional data that may improve the risk assessments and other analyses. The EPA is specifically interested in receiving any improvements to the data used in the site-specific emissions profiles used for risk modeling. Such data should include supporting documentation in sufficient detail to allow characterization of the quality and representativeness of the data or information. Section VII of this preamble provides more information on submitting data.

VII. Submitting Data Corrections

The site-specific emissions profiles used in the source category risk and demographic analyses and instructions are available for download on the RTR website at *https://www.epa.gov/stationary-sources-air-pollution/plywood-and-composite-wood-products-manufacture-national-emission.* The data files include detailed information for each HAP emissions release point for the facilities in the source category.

If you believe that the data are not representative or are inaccurate, please identify the data in question, provide your reason for concern, and provide any "improved" data that you have, if available. When you submit data, the EPA requests that you provide documentation of the basis for the revised values to support your suggested changes. To submit comments on the data downloaded from the RTR website, complete the following steps:

1. Within this downloaded file, enter suggested revisions to the data fields appropriate for that information.

2. Fill in the commenter information fields for each suggested revision (*i.e.*, commenter name, commenter organization, commenter email address, commenter phone number, and revision comments).

3. Gather documentation for any suggested emissions revisions (*e.g.*, performance test reports, material balance calculations).

4. Send the entire downloaded file with suggested revisions in Microsoft® Access format and all accompanying documentation to Docket ID No. EPA-HQ-OAR-2016-0243 (through the method described in the **ADDRESSES** section of this preamble).

5. If you are providing comments on a single facility or multiple facilities, you need only submit one file for all facilities. The file should contain all suggested changes for all sources at

that facility (or facilities). The EPA requests that all data revision comments be submitted in the form of updated Microsoft® Excel files that are generated by the Microsoft® Access file. These files are provided on the RTR website at *https://www.epa.gov/stationary-sources-air-pollution/plywood-and-composite-wood-products-manufacture-national-emission*.

VIII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *https://www.epa.gov/laws-regulations/laws-and-executive-orders*.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and was, therefore, not submitted to OMB for review.

B. Executive Order 13771: Reducing Regulation and Controlling Regulatory Costs

This action is not expected to be an Executive Order 13771 regulatory action because this action is not significant under Executive Order 12866.

C. Paperwork Reduction Act (PRA)

The information collection activities in this proposed rule have been submitted for approval to OMB under the PRA. The ICR document that the EPA prepared has been assigned EPA ICR number 1984.08. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here.

The information is being collected to assure compliance with 40 CFR part 63, subpart DDDD. The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to national emissions standards. The information collection activities also include paperwork requirements associated with initial and repeat performance

testing and parameter monitoring. The proposed amendments to the rule would eliminate the paperwork requirements associated with the SSM plan and recordkeeping of SSM events and require electronic submittal of performance test results and semiannual compliance reports. These recordkeeping and reporting requirements are specifically authorized by CAA section 114 (42 U.S.C. 7414).

Respondents/affected entities: Owners and operators of facilities subject to 40 CFR part 63, subpart DDDD, that produce plywood, composite wood products, or kiln-dried lumber.

Respondent's obligation to respond: Mandatory (40 CFR part 63, subpart DDDD).

Estimated number of respondents: 244 facilities (including existing and new facilities projected to begin reporting during the ICR period).

Frequency of response: The frequency varies depending on the type of response (*e.g.*, initial notification, semiannual compliance report).

Total estimated burden: 39,700 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $6,930,000 (per year), includes $2,365,000 annualized capital or operation and maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9.

Submit your comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden to the EPA using the docket identified at the beginning of this rule. You may also send your ICR-related comments to OMB's Office of Information and Regulatory Affairs via email to OIRA at *oira_submission@omb.eop.gov*, Attention: Desk Officer for the EPA. Since OMB is required to

make a decision concerning the ICR between 30 and 60 days after receipt, OMB must receive comments no later than **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The EPA will respond to any ICR-related comments in the final rule.

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden, or otherwise has a positive economic effect on the small entities subject to the rule. Of the 69 ultimate parent entities that are subject to the rule, 28 are small according to the Small Business Administration's small business size standards and standards regarding other entities (*e.g.*, federally recognized tribes). None of the 28 small entities have annualized costs of 1 percent or greater of sales. The EPA has, therefore, concluded that this action will not have a significant impact on a substantial number of small entities.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local, or tribal governments or the private sector.

F. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the federal government and Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes. No tribal governments own facilities that are impacted by the proposed changes to the NESHAP. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

This action is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action's health and risk assessments are contained in sections III and IV of this preamble and further documented in the risk report titled *Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which can be found in the docket for this action.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

J. National Technology Transfer and Advancement Act (NTTAA)

This action involves technical standards. The EPA proposes to use the standards currently listed in Table 4 of the rule (40 CFR part 63, subpart DDDD). While the EPA has identified another 18 voluntary consensus standards (VCS) as being potentially applicable to this proposed rule, the EPA has decided not to use these VCS in this rulemaking. The use of these VCS would

not be practical due to lack of equivalency, documentation, validation date, and other important technical and policy considerations. See the memorandum titled *Voluntary Consensus Standard Results for NESHAP: Plywood and Composite Wood Products RTR*, in the docket for this proposed rule for the reasons for these determinations.

Under 40 CFR 63.7(f) and 40 CFR 63.8(f) of subpart A of the General Provisions, a source may apply to the EPA for permission to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications, or procedures in the final rule or any amendments.

The EPA welcomes comments on this aspect of the proposed rulemaking and, specifically, invites the public to identify potentially applicable VCS and to explain why such standards should be used in this regulation.

K. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994).

The documentation for this decision is contained in section IV.A.6 of this preamble and the technical report, *Risk and Technology Review—Analysis of Demographic Factors for Populations Living Near Plywood and Composite Wood Products Source Category*, in the public docket for this action.

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Hazardous substances, Reporting and recordkeeping requirements.

_____.
Dated:

_____
Andrew R. Wheeler,
Administrator.

For the reasons set out in the preamble, 40 CFR part 63 is proposed to be amended as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq*.

Subpart DDDD—[Amended]

2. Section 63.2233 is amended by revising paragraphs (a)(1) and (2) and paragraph (b) to read as follows:

§63.2233 When do I have to comply with this subpart?

(a) * * *

(1) If the initial startup of your affected source is before September 28, 2004, then you must comply with the compliance options, operating requirements, and work practice requirements for new and reconstructed sources in this subpart no later than September 28, 2004, except as otherwise specified in §§63.2250, 63.2280(b) and (d), 63.2281(b)(6), 63.2282(a)(2) and Tables 3, 7, 9, and 10 to this subpart.

(2) If the initial startup of your affected source is after September 28, 2004, then you must comply with the compliance options, operating requirements, and work practice requirements for new and reconstructed sources in this subpart upon initial startup of your affected source, except as otherwise specified in §§63.2250, 63.2280(b) and (d), 63.2281(b)(6), 63.2282(a)(2) and Tables 3, 7, 9, and 10 to this subpart.

(b) If you have an existing affected source, you must comply with the compliance options, operating requirements, and work practice requirements for existing sources no later

than October 1, 2007, except as otherwise specified in §§63.2240(c)(2)(vi)(A), 63.2250, 63.2280(b) and (d), 63.2281(b)(6) and (c)(4), 63.2282(a)(2) and Tables 3, 7, 9, and 10 to this subpart.

* * * * *

3. Section 63.2240 is amended by revising paragraph (c)(2)(vi)(A) to read as follows:

§63.2240 What are the compliance options and operating requirements and how must I meet them?

* * * * *

(c) * * *

(2) * * *

(vi) * * *

(A) Before [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], emissions during periods of startup, shutdown, and malfunction as described in the startup, shutdown, and malfunction plan (SSMP). On and after [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], emissions during safety-related shutdowns or pressurized refiner startups and shutdowns.

* * * * *

4. Section 63.2250 is amended by:

a. Adding two new sentences to the end of paragraph (a);

b. Revising paragraph (b);

c. Revising paragraph (c); and

d. Adding new paragraphs (e) through (g).

The revision and additions read as follows:

§63.2250 What are the general requirements?

(a) * * * For any affected source that commences construction or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, this paragraph does not apply on and after [**DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] or initial startup of the affected source, whichever is later. For all other affected sources, this paragraph does not apply on and after [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**].

(b) You must always operate and maintain your affected source, including air pollution control and monitoring equipment according to the provisions in §63.6(e)(1)(i). For any affected source that commences construction or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, this paragraph does not apply on and after [**DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] or initial startup of the affected source, whichever is later. For all other affected sources, this paragraph does not apply on and after [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE** F**EDERAL REGISTER**].

(c) You must develop a written SSMP according to the provisions in §63.6(e)(3). For any affected source that commences construction or reconstruction after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**], this paragraph does not apply on and after [**DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] or initial startup of the affected source, whichever is later. For all other affected sources, this paragraph does not apply on and after [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**].

* * * * *

(e) You must be in compliance with the provisions of subpart A of this part, except as noted in Table 10 to this subpart.

(f) Upon [**DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] or initial startup of the affected source, whichever is later, for affected sources that commenced construction or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, and on and after [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] for all other affected sources, you must be in compliance with the compliance options, operating requirements, and the work practice requirements in this subpart when the process unit(s) subject to the compliance options, operating requirements, and work practice requirements are operating, except as specified in paragraphs (f)(1) through (4) of this section.

(1) Prior to process unit initial startup.

(2) During safety-related shutdowns conducted according to the work practice requirement in Table 3 to this subpart.

(3) During pressurized refiner startup and shutdown according to the work practice requirement in Table 3 to this subpart.

(4) You must minimize the length of time when compliance options and operating requirements in this subpart are not met due to the conditions in paragraphs (f)(2) and (3) of this section.

(g) For affected sources that commenced construction or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** and for all other affected sources on and after [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL**

RULE IN THE FEDERAL REGISTER], you must always operate and maintain your affected source, including air pollution control and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

5. Section 63.2252 is revised to read as follows:

§63.2252 What are the requirements for process units that have no control or work practice requirements?

For process units not subject to the compliance options or work practice requirements specified in §63.2240 (including, but not limited to, lumber kilns), you are not required to comply with the compliance options, work practice requirements, performance testing, monitoring, and recordkeeping or reporting requirements of this subpart, or any other requirements in subpart A of this part, except for the initial notification requirements in §63.9(b).

6. Section 63.2262 is amended by revising paragraphs (a), (b), (m)(1) and (n)(1) to read as follows:

§63.2262 How do I conduct performance tests and establish operating requirements?

(a) You must conduct each performance test according to the requirements in paragraphs (b) through (o) of this section, and according to the methods specified in Table 4 to this subpart.

(b) *Periods when performance tests must be conducted*. You must conduct each performance test based on representative performance (*i.e.*, performance based on representative operating conditions as defined in §63.2292) of the affected source for the period being tested. Representative conditions exclude periods of startup and shutdown. You may not conduct performance tests during periods of malfunction. You must describe representative operating conditions in your performance test report for the process and control systems and explain why they are representative. You must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions are representative. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

* * * * *

(m) * * *

(1) During the performance test, you must continuously monitor the biofilter bed temperature during each of the required 1-hour test runs. To monitor biofilter bed temperature, you may use multiple thermocouples in representative locations throughout the biofilter bed and calculate the average biofilter bed temperature across these thermocouples prior to reducing the temperature data to 15-minute averages for purposes of establishing biofilter bed temperature limits. The biofilter bed temperature range must be established as the temperature values 5 percent below the minimum and 5 percent above the maximum 15-minute biofilter bed temperatures monitored during the three test runs. You may base your biofilter bed temperature range on values recorded during previous performance tests provided that the data used to establish the temperature ranges have been obtained using the test methods required in this subpart. If you use data from previous performance tests, you must certify that the biofilter and

associated process unit(s) have not been modified subsequent to the date of the performance tests. Replacement of the biofilter media with the same type of material is not considered a modification of the biofilter for purposes of this section.

* * * * *

(n) * * *

(1) During the performance test, you must identify and document the process unit controlling parameter(s) that affect total HAP emissions during the three-run performance test. The controlling parameters you identify must coincide with the representative operating conditions you describe according to §63.2262(b). For each parameter, you must specify appropriate monitoring methods, monitoring frequencies, and for continuously monitored parameters, averaging times not to exceed 24 hours. The operating limit for each controlling parameter must then be established as the minimum, maximum, range, or average (as appropriate depending on the parameter) recorded during the performance test. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

* * * * *

7. Section 63.2269 is amended by revising paragraph (b)(4) to read as follows.

§63.2269 What are my monitoring installation, operation, and maintenance requirements?

* * * * *

(b) * * *

(4) Validate the temperature sensor's reading at least semiannually using the requirements of paragraph (b)(4)(i), (ii), (iii), (iv), or (v) of this section:

(i) Compare measured readings to a National Institute of Standards and Technology (NIST) traceable temperature measurement device or simulate a typical operating temperature using a NIST traceable temperature simulation device. When the temperature measurement device method is used, the sensor of the NIST traceable calibrated device must be placed as close as practicable to the process sensor, and both devices must be subjected to the same environmental conditions. The accuracy of the temperature measured must be 2.5 percent of the temperature measured by the NIST traceable device or 5 °F, whichever is greater.

(ii) Follow applicable procedures in the thermocouple manufacturer owner's manual.

(iii) Request thermocouple manufacturer to certify or re-certify electromotive force (electrical properties) of the thermocouple.

(iv) Replace thermocouple with a new certified thermocouple in lieu of validation.

(v) Permanently install a redundant temperature sensor as close as practicable to the process temperature sensor. The sensors must yield a reading within 30 °F of each other for thermal oxidizers and catalytic oxidizers; within 5 °F of each other for biofilters; and within 20 °F of each other for dry rotary dryers.

* * * * *

8. Section 63.2270 is amended by revising paragraph (c) to read as follows:

§63.2270 How do I monitor and collect data to demonstrate continuous compliance?

* * * * *

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities; or data recorded during periods of safety-related shutdown, pressurized refiner startup or shutdown, or control device downtime covered in any approved routine control device maintenance exemption in data averages and calculations

used to report emission or operating levels, nor may such data be used in fulfilling a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing the operation of the control system.

* * * * *

9. Section 63.2271 is amended by removing and reserving paragraph (b)(2).

§63.2271 How do I demonstrate continuous compliance with the compliance options, operating requirements, and work practice requirements?

* * * * *

(b) * * *

(2) [Reserved]

* * * * *

10. Section 63.2280 is amended by:

a. Revising paragraph (b);

b. Revising paragraph (d) introductory text; and

c. Revising paragraph (d)(2).

The revisions read as follows:

§63.2280 What notifications must I submit and when?

* * * * *

(b) You must submit an Initial Notification no later than 120 calendar days after September 28, 2004, or after initial startup, whichever is later, as specified in §63.9(b)(2). Initial Notifications required to be submitted after [**DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] for affected sources that commence construction or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**

and on and after [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] for all other affected sources must be submitted following the procedure specified in §63.2281(h), (k), and (l).

* * * * *

(d) If you are required to conduct a performance test, design evaluation, or other initial compliance demonstration as specified in Tables 4, 5, and 6 to this subpart, you must submit a Notification of Compliance Status as specified in §63.9(h)(2)(ii). After [**DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] for affected sources that commence construction or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** and on and after [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] for all other affected sources, submit all subsequent Notifications of Compliance Status following the procedure specified in §63.2281(h), (k), and (l).

* * * * *

(2) For each initial compliance demonstration required in Tables 5 and 6 to this subpart that includes a performance test conducted according to the requirements in Table 4 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test.

* * * * *

11. Section 63.2281 is amended by:

a. Revising paragraph (b) introductory text;

b. Adding paragraph (b)(6);

c. Revising paragraph (c) introductory text;

d. Revising paragraph (c)(4);

e. Removing and reserving paragraph (c)(6);

f. Revising paragraph (d)(2);

g. Revising the first sentence of paragraph (e) introductory text;

h. Revising paragraph (e)(2);

i. Adding paragraphs (e)(12) and (13); and

j. Adding paragraphs (h) through (l).

The revisions and additions read as follows:

§63.2281 What reports must I submit and when?

* * * * *

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 9 to this subpart and as specified in paragraphs (b)(1) through (6) of this section.

* * * * *

(6) After [**DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] for affected sources that commenced construction or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** and on and after [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] for all other affected sources, submit all subsequent reports following the procedure specified in paragraph (h), (k) and (l) of this section.

(c) The compliance report must contain the information in paragraphs (c)(1) through (7) of this section.

* * * * *

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information specified in §63.10(d)(5)(i) before [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] for affected sources that commenced construction or reconstruction before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

* * * * *

(d) * * *

(2) Information on the date, time, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from a compliance option or operating requirement occurring at an affected source where you are using a CMS to comply with the compliance options and operating requirements in this subpart, you must include the information in paragraphs (c)(1) through (6) and paragraphs (e)(1) through (13) of this section. * * *

* * * * *

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

* * * * *

(12) An estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions.

(13) The total operating time of each affected source during the reporting period.

* * * * *

(h) *Submitting reports electronically.* If you are required to submit reports following the procedure specified in this paragraph, you must submit reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). For semiannual compliance reports required in §63.2281 and Table 9 (row 1) of this subpart, you must use the appropriate electronic report template on the CEDRI website (*https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri*) for this subpart once the reporting template has been available on the CEDRI website for 6 months. The date report templates become available will be listed on the CEDRI website. If the reporting form for the semiannual compliance report specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate addresses listed in §63.13. Once the form has been available in CEDRI for 6 months you must begin submitting all subsequent reports via CEDRI. Initial Notifications developed according to §63.2280(b) and Notifications of Compliance Status developed according to §63.2280(d) may be uploaded in a user-specified format such as portable document format (PDF). The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. If you claim some of the information required to be submitted via CEDRI is confidential business information (CBI), submit a complete report, including information claimed to be CBI, to the EPA. The report must be generated using the appropriate form on the CEDRI website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group,

MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(i) *Performance tests.* Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (i)(1) through (3) of this section.

(1) *Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert) at the time of the test*. Submit the results of the performance test to the EPA via CEDRI, which can be accessed through the EPA's CDX (https://cdx.epa.gov/). The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

(2) *Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test*. The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(3) *Confidential business information (CBI)*. If you claim some of the information submitted under paragraph (i) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S.

EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (i) of this section.

(j) *Performance evaluations.* Within 60 days after the date of completing each continuous monitoring system (CMS) performance evaluation (as defined in §63.2), you must submit the results of the performance evaluation following the procedures specified in paragraphs (j)(1) through (3) of this section.

(1) *Performance evaluations of CMS measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation*. Submit the results of the performance evaluation to the EPA via CEDRI, which can be accessed through the EPA's CDX. The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the XML schema listed on the EPA's ERT website.

(2) *Performance evaluations of CMS measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation*. The results of the performance evaluation must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(3) *Confidential business information (CBI)*. If you claim some of the information submitted under paragraph (j) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic

storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (j) of this section.

(k) *Claims of EPA system outage.* If you are required to electronically submit a report or notification through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (k)(1) through (7) of this section.

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning 5 business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

(4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(5) You must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(l) *Claims of force majeure.* If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with the reporting requirement. To assert a claim of force majuere, you must meet the requirements outlined in paragraphs (l)(1) through (5) of this section.

(1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.*, hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.*, large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

(i) A written description of the force majeure event;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

12. Section 63.2282 is amended by:

a. Revising paragraph (a)(2);

b. Revising paragraph (c)(2); and

c. Adding paragraph (f).

The revisions and additions read as follows:

§63.2282 What records must I keep?

(a) * * *

(2) Before [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], the records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction for affected sources that commenced construction or reconstruction before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. After [**DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] for affected sources that commenced construction or reconstruction after **[INSERT DATE OF**

PUBLICATION IN THE FEDERAL REGISTER] and on and after [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] for all other affected sources, the records related to startup and shutdown, failures to meet the standard, and actions taken to minimize emissions, specified in paragraphs (a)(2)(i) through (iv) of this section.

(i) Record the date, time, and duration of each startup and/or shutdown period, including the periods when the affected source was subject to the standard applicable to startup and shutdown;

(ii) In the event that an affected unit fails to meet an applicable standard, record the number of failures; for each failure, record the date, time, cause and duration of each failure;

(iii) For each failure to meet an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions; and

(iv) Record actions taken to minimize emissions in accordance with §63.2250(g), and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

* * * * *

(c) * * *

(2) Previous (*i.e.*, superseded) versions of the performance evaluation plan, with the program of corrective action included in the plan required under §63.8(d)(2).

* * * * *

(f) You must keep the written CMS quality control procedures required by §63.8(d)(2) on record for the life of the affected source or until the affected source is no longer subject to the provisions of this subpart, to be made available for inspection, upon request, by the

Administrator. If the performance evaluation plan is revised, you must keep previous (*i.e.*, superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. The program of corrective action should be included in the plan required under §63.8(d)(2).

13. Section 63.2283 is amended by adding paragraph (d) to read as follows:

§63.2283 In what form and how long must I keep my records?

* * * * *

(d) Any records required to be maintained by this part that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

14. Section 63.2290 is revised to read as follows:

§63.2290 What parts of the General Provisions apply to me?

Table 10 to this subpart shows which parts of the General Provisions in §§63.1 through 63.16 apply to you.

15. Section 63.2291 is amended by revising paragraph (c) introductory text and adding paragraph (c)(5) to read as follows:

§63.2291 Who implements and enforces this subpart?

* * * * *

(c) The authorities that will not be delegated to State, local, or tribal agencies are listed in paragraphs (c)(1) through (5) of this section.

* * * * *

(5) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

16. Section 63.2292 is amended by:

a. Revising the definitions of "MSF," "non-HAP coating" and "representative operating conditions";

b. Adding the definition of "safety-related shutdown" in alphabetical order; and

c. Removing the definition of "startup, shutdown, and malfunction plan."

The revisions and additions read as follows:

§63.2292 What definitions apply to this subpart?

* * * * *

MSF means thousand square feet (92.9 square meters). Square footage of panels is usually measured on a thickness basis, such as $^{3}/_{8}$ -inch, to define the total volume of panels. Equation 3 of §63.2262(j) shows how to convert from one thickness basis to another.

* * * * *

Non-HAP coating means a coating with HAP contents below 0.1 percent by mass for the carcinogenic HAP compounds listed in Appendix B to this subpart and below 1.0 percent by mass for other HAP compounds.

* * * * *

Representative operating conditions means operation of a process unit during performance testing under the conditions that the process unit will typically be operating in the future, including use of a representative range of materials (*e.g.*, wood material of a typical species mix and moisture content or typical resin formulation) and representative operating temperature range. Representative operating conditions exclude periods of startup and shutdown.

* * * * *

Safety-related shutdown means an unscheduled shutdown of a process unit subject to a compliance option in Table 1B to this subpart (or a process unit with HAP control under an emissions averaging plan developed according to §63.2240(c)) during which time emissions from the process unit cannot be safely routed to the control system in place to meet the compliance options or operating requirements in this subpart without imminent danger to the process, control system, or system operator.

* * * * *

17. Table 3 to Subpart DDDD is revised to read as follows:

Table 3 to Subpart DDDD of Part 63—Work Practice Requirements

For the following process units at existing or new affected sources . . .	You must . . .
(1) Dry rotary dryers	Process furnish with a 24-hour block average inlet moisture content of less than or equal to 30 percent (by weight, dry basis); AND operate with a 24-hour block average inlet dryer temperature of less than or equal to 600 °F.
(2) Hardwood veneer dryers	Process less than 30 volume percent softwood species on an annual basis.
(3) Softwood veneer dryers	Minimize fugitive emissions from the dryer doors through (proper maintenance procedures) and the green end of the dryers (through proper balancing of the heated zone exhausts).
(4) Veneer redryers	Process veneer that has been previously dried, such that the 24-hour block average inlet moisture content of the veneer is less than or equal to 25 percent (by weight, dry basis).
(5) Group 1 miscellaneous coating operations	Use non-HAP coatings as defined in §63.2292.
(6) Process units and control systems undergoing safety-related shutdown on and after [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] except as noted in footnote "a" to this table.	Follow documented site-specific procedures such as use of automated controls or other measures that you have developed to protect workers and equipment to ensure that the flow of raw materials (such as furnish or resin) and fuel or process heat (as applicable) ceases and that material is removed from the process unit(s) as expeditiously as possible given the system design.
(7) Pressurized refiners undergoing startup or shutdown on and after [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] except as noted in footnote "a" to this table.	Route exhaust gases from the pressurized refiner to its control system no later than 15 minutes after furnish is fed from the pressurized refiner to the tube dryer when starting up, and no more than 15 minutes after furnish ceases to be fed to the pressurized refiner when shutting down.

[a] New or reconstructed affected sources that commenced construction or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** must comply with this requirement beginning on [**DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] or upon initial startup, whichever is later.

18. Table 4 to Subpart DDDD is revised to read as follows:

Table 4 to Subpart DDDD of Part 63—Requirements for Performance Tests

For . . .	You must . . .	Using . . .
(1) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	select sampling port's location and the number of traverse ports	Method 1 or 1A of 40 CFR part 60, appendix A-1 (as appropriate).
(2) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	determine velocity and volumetric flow rate	Method 2 in addition to Method 2A, 2C, 2D, 2F, or 2G in appendix A-1 and A-2 to 40 CFR part 60 (as appropriate).
(3) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	conduct gas molecular weight analysis	Method 3, 3A, or 3B in appendix A-2 to 40 CFR part 60 (as appropriate).
(4) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	measure moisture content of the stack gas	Method 4 in appendix A-3 to 40 CFR part 60; OR Method 320 in appendix A to 40 CFR part 63; OR ASTM D6348-03 (IBR, see §63.14).
(5) each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a total HAP as THC compliance option	measure emissions of total HAP as THC	Method 25A in appendix A-7 to 40 CFR part 60. You may measure emissions of methane using EPA Method 18 in appendix A-6 to 40 CFR part 60 and subtract the methane emissions from the emissions of total HAP as THC.
(6) each process unit subject to a compliance option in table 1A to this subpart; OR for each process unit used in calculation of an emissions average under §63.2240(c)	measure emissions of total HAP (as defined in §63.2292)	Method 320 in appendix A to 40 CFR part 63; OR the NCASI Method IM/CAN/WP-99.02 (IBR, see §63.14); OR the NCASI Method ISS/FP-A105.01 (IBR, see §63.14); OR ASTM D6348-03 (IBR, see §63.14) provided that percent R as determined in Annex A5 of ASTM D6348-03 is equal or greater than 70 percent and less than or equal to 130 percent.
(7) each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a methanol compliance option	measure emissions of methanol	Method 308 in appendix A to 40 CFR part 63; OR Method 320 in appendix A to 40 CFR part 63; OR the NCASI Method CI/WP-98.01 (IBR, see §63.14); OR the NCASI Method IM/CAN/WP-

For . . .	You must . . .	Using . . .
		99.02 (IBR, see §63.14); OR the NCASI Method ISS/FP-A105.01 (IBR, see §63.14).
(8) each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a formaldehyde compliance option	measure emissions of formaldehyde	Method 316 in appendix A to 40 CFR part 63; OR Method 320 in appendix A to 40 CFR part 63; OR Method 0011 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA Publication No. SW-846) for formaldehyde; OR the NCASI Method CI/WP-98.01 (IBR, see §63.14); OR the NCASI Method IM/CAN/WP-99.02 (IBR, see §63.14); OR the NCASI Method ISS/FP-A105.01 (IBR, see §63.14).
(9) each reconstituted wood product press at a new or existing affected source or reconstituted wood product board cooler at a new affected source subject to a compliance option in table 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	meet the design specifications included in the definition of wood products enclosure in §63.2292; or determine the percent capture efficiency of the enclosure directing emissions to an add-on control device	Methods 204 and 204A through 204F of 40 CFR part 51, appendix M, to determine capture efficiency (except for wood products enclosures as defined in §63.2292). Enclosures that meet the definition of wood products enclosure or that meet Method 204 requirements for a permanent total enclosure (PTE) are assumed to have a capture efficiency of 100 percent. Enclosures that do not meet either the PTE requirements or design criteria for a wood products enclosure must determine the capture efficiency by constructing a TTE according to the requirements of Method 204 and applying Methods 204A through 204F (as appropriate). As an alternative to Methods 204 and 204A through 204F, you may use the tracer gas method contained in appendix A to this subpart.
(10) each reconstituted wood product press at a new or existing affected source or reconstituted wood product board cooler at a new affected source subject to a compliance option in table 1A to this subpart	determine the percent capture efficiency	a TTE and Methods 204 and 204A through 204F (as appropriate) of 40 CFR part 51, appendix M. As an alternative to installing a TTE and using Methods 204 and 204A through 204F, you may use the tracer gas method contained in appendix A to this subpart. Enclosures that meet the design criteria (1) through (4) in the definition of wood products enclosure, or that meet Method 204 requirements for a PTE (except for the criteria specified in section 6.2 of Method 204) are assumed to have a capture efficiency of 100 percent. Measured emissions divided by the capture efficiency provides the emission rate.
(11) each process unit subject to a compliance option in tables 1A and 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	establish the site-specific operating requirements (including the parameter limits or THC concentration limits) in Table 2 to this subpart	data from the parameter monitoring system or THC CEMS and the applicable performance test method(s).

19. Table 7 to Subpart DDDD is revised to read as follows:

Table 7 to Subpart DDDD of Part 63—Continuous Compliance With the Compliance Options and Operating Requirements

For . . .	For the following compliance options and operating requirements . . .	You must demonstrate continuous compliance by . . .
(1) Each process unit listed in Table 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c) and the operating requirements in Table 2 to this subpart based on monitoring of operating parameters	Collecting and recording the operating parameter monitoring system data listed in Table 2 to this subpart for the process unit according to §63.2269(a) through (b) and §63.2270; AND reducing the operating parameter monitoring system data to the specified averages in units of the applicable requirement according to calculations in §63.2270; AND maintaining the average operating parameter at or above the minimum, at or below the maximum, or within the range (whichever applies) established according to §63.2262.
(2) Each process unit listed in Tables 1A and 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	Compliance options in Tables 1A and 1B to this subpart or the emissions averaging compliance option in §63.2240(c) and the operating requirements in Table 2 of this subpart based on THC CEMS data	Collecting and recording the THC monitoring data listed in Table 2 to this subpart for the process unit according to §63.2269(d); AND reducing the CEMS data to 3-hour block averages according to calculations in §63.2269(d); AND maintaining the 3-hour block average THC concentration in the exhaust gases less than or equal to the THC concentration established according to §63.2262.
(3) Each process unit using a biofilter	Compliance options in Tables 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	Conducting a repeat performance test using the applicable method(s) specified in Table 4 to this subpart within 2 years following the previous performance test and within 180 days after each replacement of any portion of the biofilter bed media with a different type of media or each replacement of more than 50 percent (by volume) of the biofilter bed media with the same type of media.
(4) Each process unit using a catalytic oxidizer	Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	Checking the activity level of a representative sample of the catalyst at least every 12 months and taking any necessary corrective action to ensure that the catalyst is performing within its design range.
(5) Each process unit listed in Table 1A to this subpart, or each process unit without a control device used in calculation of an emissions averaging debit under §63.2240(c)	Compliance options in Table 1A to this subpart or the emissions averaging compliance option in §63.2240(c) and the operating requirements in Table 2 to this subpart based on monitoring of process unit controlling operating parameters	Collecting and recording on a daily basis process unit controlling operating parameter data; AND maintaining the operating parameter at or above the minimum, at or below the maximum, or within the range (whichever applies) established according to §63.2262.
(6) Each Process unit listed in Table 1B to this subpart using a wet control device as the sole	Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	Implementing your plan to address how organic HAP captured in the wastewater from the wet control device is contained or destroyed to minimize re-release to the atmosphere.

For . . .	For the following compliance options and operating requirements . . .	You must demonstrate continuous compliance by . . .
means of reducing HAP emissions		
(7) Each process unit listed in Table 1B to this subpart using a control device other than a biofilter	Compliance options in Tables 1B to this subpart	Conducting a repeat performance test using the applicable method(s) specified in Table 4 to this subpart by [**DATE 3 YEARS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] or within 60 months following the previous performance test, whichever is later, and thereafter within 60 months following the previous performance test.

20. Table 9 to Subpart DDDD is revised to read as follows:

Table 9 to Subpart DDDD of Part 63—Requirements for Reports

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
(1) Compliance report	The information in §63.2281(c) through (g)	Semiannually according to the requirements in §63.2281(b).
(2) immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP before [**DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**][a]	(i) Actions taken for the event	By fax or telephone within 2 working days after starting actions inconsistent with the plan.
	(ii) The information in §63.10(d)(5)(ii)	By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority.
(3) Performance test report	The information required in §63.7(g)	According to the requirements of §63.2281(i).
(4) CMS performance evaluation	The information required in §63.7(g)	According to the requirements of §63.2281(j).

[a] The requirement for the SSM report in row 2 of this table does not apply for new or reconstructed affected sources that commenced construction or reconstruction after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

21. Table 10 to Subpart DDDD is revised to read as follows:

Table 10 to Subpart DDDD of Part 63—Applicability of General Provisions to Subpart DDDD

Citation	Subject	Brief description	Applies to subpart DDDD before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table	Applies to subpart DDDD on and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table
§63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications	Yes.	Yes.
§63.2	Definitions	Definitions for part 63 standards	Yes.	Yes.
§63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.	Yes.
§63.4	Prohibited Activities and Circumvention	Prohibited activities; compliance date; circumvention, fragmentation	Yes.	Yes.
§63.5	Preconstruction Review and Notification Requirements	Preconstruction review requirements of section 112(i)(1)	Yes.	Yes.
§63.6(a)	Applicability	GP apply unless compliance extension; GP apply to area sources that become major	Yes.	Yes.
§63.6(b)(1)-(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for section 112(f)	Yes.	Yes.
§63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.	Yes.

Citation	Subject	Brief description	Applies to subpart DDDD before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table	Applies to subpart DDDD on and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table
§63.6(b)(6)	[Reserved]			
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources that Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	Yes.	Yes.
§63.6(c)(1)-(2)	Compliance Dates for Existing Sources	Comply according to date in subpart, which must be no later than 3 years after effective date; for section 112(f) standards, comply within 90 days of effective date unless compliance extension	Yes.	Yes.
§63.6(c)(3)-(4)	[Reserved]			
§63.6(c)(5)	Compliance Dates for Existing Area Sources that Become Major	Area sources that become major must comply with major source standards by date indicated in subpart or by equivalent time period (*e.g.*, 3 years)	Yes.	Yes.
§63.6(d)	[Reserved]			
§63.6(e)(1)(i)	General Duty to Minimize Emissions.	You must operate and maintain affected source in a manner consistent with safety and good air pollution control practices for minimizing emissions	Yes.	No, see §63.2250 for general duty requirement.
§63.6(e)(1)(ii)	Requirement to Correct Malfunctions ASAP	You must correct malfunctions as soon as	Yes.	No.

Citation	Subject	Brief description	Applies to subpart DDDD before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table	Applies to subpart DDDD on and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table
		practicable after their occurrence		
§63.6(e)(1)(iii)	Operation and Maintenance Requirements	Operation and maintenance requirements are enforceable independent of emissions limitations or other requirements in relevant standards	Yes.	Yes.
§63.6(e)(2)	[Reserved]			
§63.6(e)(3)	Startup, Shutdown, and Malfunction Plan (SSMP)	Requirement for SSM and SSMP; content of SSMP	Yes.	No.
§63.6(f)(1)	SSM Exemption	You must comply with emission standards at all times except during SSM	Yes.	No.
§63.6(f)(2)-(3)	Methods for Determining Compliance/Finding of Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.	Yes.
§63.6(g)(1)-(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.	Yes.
§63.6(h)(1)	SSM Exemption	You must comply with opacity and visible emission standards at all times except during SSM	NA.	No.
§63.6(h)(2)-(9)	Opacity/Visible Emission (VE) Standards	Requirements for opacity and visible emission standards	NA.	NA.
§63.6(i)(1)-(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.	Yes.

Citation	Subject	Brief description	Applies to subpart DDDD before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table	Applies to subpart DDDD on and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table
§63.6(i)(15)	[Reserved]			
§63.6(i)(16)	Compliance Extension	Compliance extension and Administrator's authority	Yes.	Yes.
§63.6(j)	Presidential Compliance Exemption	President may exempt source category from requirement to comply with rule	Yes.	Yes.
§63.7(a)(1)-(2)	Performance Test Dates	Dates for conducting initial performance testing and other compliance demonstrations; must conduct 180 days after first subject to rule	Yes.	Yes.
§63.7(a)(3)	Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time	Yes.	Yes.
§63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.	Yes.
§63.7(b)(2)	Notification of Rescheduling	If have to reschedule performance test, must notify Administrator as soon as practicable	Yes.	Yes.
§63.7(c)	Quality Assurance/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.	Yes.

Citation	Subject	Brief description	Applies to subpart DDDD before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table	Applies to subpart DDDD on and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table
§63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.	Yes.
§63.7(e)(1)	Performance Testing	Performance tests must be conducted under representative conditions; cannot conduct performance tests during SSM; not a violation to exceed standard during SSM	Yes.	No, see §63.2262(a)-(b).
§63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to rule and EPA test methods unless Administrator approves alternative	Yes.	Yes.
§63.7(e)(3)	Test Run Duration	Must have three test runs for at least the time specified in the relevant standard; compliance is based on arithmetic mean of three runs; specifies conditions when data from an additional test run can be used	Yes.	Yes.
§63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an alternative test method	Yes.	Yes.
§63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the notification of compliance status; keep data for 5 years	Yes.	Yes.

Citation	Subject	Brief description	Applies to subpart DDDD before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table	Applies to subpart DDDD on and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table
§63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.	Yes.
§63.8(a)(2)	Performance Specifications	Performance specifications in appendix B of part 60 apply	Yes.	Yes.
§63.8(a)(3)	[Reserved]			
§63.8(a)(4)	Monitoring with Flares	Requirements for flares in §63.11 apply	NA.	NA.
§63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.	Yes.
§63.8(b)(2)-(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each effluent before it is combined and before it is released to the atmosphere unless Administrator approves otherwise; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	Yes.	Yes.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with and good	Yes.	Yes.

Citation	Subject	Brief description	Applies to subpart DDDD before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table	Applies to subpart DDDD on and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table
		air pollution control practices		
§63.8(c)(1)(i)	Operation and Maintenance of CMS	Must maintain and operate CMS in accordance with §63.6(e)(1)	Yes.	No.
§63.8(c)(1)(ii)	Spare Parts for CMS	Must maintain spare parts for routine CMS repairs	Yes.	Yes.
§63.8(c)(1)(iii)	Requirements to Develop SSMP for CMS	Must develop and implement SSMP for CMS	Yes.	No.
§63.8(c)(2)-(3)	Monitoring System Installation	Must install to get representative emission of parameter measurements; must verify operational status before or at performance test	Yes.	Yes.
§63.8(c)(4)	Continuous Monitoring System (CMS) Requirements	CMS must be operating except during breakdown, out-of-control, repair, maintenance, and high-level calibration drifts; COMS must have a minimum of one cycle of sampling and analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period; CEMS must have a minimum of one cycle of operation for each successive 15-minute period	Yes.	Yes.

Citation	Subject	Brief description	Applies to subpart DDDD before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table	Applies to subpart DDDD on and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] except as noted in footnote "a" to this table
§63.8(c)(5)	Continuous Opacity Monitoring System (COMS) Minimum Procedures	COMS minimum procedures	NA.	NA.
§63.8(c)(6)-(8)	CMS Requirements	Zero and high-level calibration check requirements; out-of-control periods	Yes.	Yes.
§63.8(d)(1)-(2)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.	Yes.	Yes.
§63.8(d)(3)	Written Procedures for CMS	Must keep quality control plan on record for 5 years. Keep old versions for 5 years after revisions. May incorporate as part of SSMP to avoid duplication.	Yes.	No, see §63.2282(f).
§63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	Yes.	Yes.
§63.8(f)(1)-(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	Yes.	Yes.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for CEMS	Yes.	Yes.
§63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally	Yes.	Yes.

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		spaced data points; data that can't be used in average; rounding of data		
§63.9(a)	Notification Requirements	Applicability and State delegation	Yes.	Yes.
§63.9(b)(1)-(2)	Initial Notifications	Submit notification 120 days after effective date; contents of notification	Yes.	Yes.
§63.9(b)(3)	[Reserved]			
§63.9(b)(4)-(5)	Initial Notifications	Submit notification 120 days after effective date; notification of intent to construct/reconstruct; notification of commencement of construct/reconstruct; notification of startup; contents of each	Yes.	Yes.
§63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed best available control technology/lowest achievable emission rate	Yes.	Yes.
§63.9(d)	Notification of Special Compliance Requirements for New Source	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.	Yes.
§63.9(e)	Notification of Performance Test	Notify EPA Administrator 60 days prior	Yes.	Yes.
§63.9(f)	Notification of Visible Emissions/Opacity Test	Notify EPA Administrator 30 days prior	No.	No.

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§63.9(g)	Additional Notifications When Using CMS	Notification of performance evaluation; notification using COMS data; notification that exceeded criterion for relative accuracy	Yes.	Yes.
§63.9(h)(1)-(6)	Notification of Compliance Status	Contents; due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes.	Yes.
§63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change in when notifications must be submitted	Yes.	Yes.
§63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.	Yes.
§63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.	Yes.
§63.10(b)(1)	Recordkeeping/Reporting	General Requirements; keep all records readily available; keep for 5 years	Yes.	Yes.
§63.10(b)(2)(i)	Recordkeeping of Occurrence and Duration of Startups and Shutdowns	Records of occurrence and duration of each startup or shutdown that causes source to exceed emission limitation	Yes.	No, see §63.2282(a).

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§63.10(b)(2)(ii)	Recordkeeping of Failures to Meet a Standard	Records of occurrence and duration of each malfunction of operation or air pollution control and monitoring equipment	Yes.	No, see §63.2282(a) for recordkeeping of (1) date, time and duration; (2) listing of affected source or equipment, and an estimate of the quantity of each regulated pollutant emitted over the standard; and (3) actions to minimize emissions and correct the failure.
§63.10(b)(2)(iii)	Maintenance Records	Records of maintenance performed on air pollution control and monitoring equipment	Yes.	Yes.
§63.10(b)(2)(iv)-(v)	Actions Taken to Minimize Emissions During SSM	Records of actions taken during SSM to minimize emissions	Yes.	No.
§63.10(b)(2)(vi) and (x)-(xi)	CMS Records	Malfunctions, inoperative, out-of-control	Yes.	Yes.
§63.10(b)(2)(vii)-(ix)	Records	Measurements to demonstrate compliance with compliance options and operating requirements; performance test, performance evaluation, and visible emission observation results; measurements to	Yes.	Yes.

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		determine conditions of performance tests and performance evaluations		
§63.10(b)(2)(xii)	Records	Records when under waiver	Yes.	Yes.
§63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.	Yes.
§63.10(b)(2)(xiv)	Records	All documentation supporting initial notification and notification of compliance status	Yes.	Yes.
§63.10(b)(3)	Records	Applicability determinations	Yes.	Yes.
§63.10(c)(1)-(6), (9)-(14)	Records	Additional records for CMS	Yes.	Yes.
§63.10(c)(7)-(8)	Records	Records of excess emissions and parameter monitoring exceedances for CMS	No.	No.
§63.10(c)(15)	Use of SSMP	Use SSMP to satisfy recordkeeping requirements for identification of malfunction, correction action taken, and nature of repairs to CMS	Yes.	No.
§63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.	Yes.
§63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.	Yes.
§63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	NA.	NA.

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§63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.	Yes.
§63.10(d)(5)(i)	Periodic SSM Reports	Contents and submission of periodic SSM reports	Yes.	No, see §63.2281(d)-(e) for malfunction reporting requirements.
§63.10(d)(5)(ii)	Immediate SSM Reports	Contents and submission of immediate SSM reports	Yes.	No.
§63.10(e)(1)-(2)	Additional CMS Reports	Must report results for each CEM on a unit; written copy of performance evaluation; 3 copies of COMS performance evaluation	Yes.	Yes.
§63.10(e)(3)	Reports	Excess emission reports	No.	No.
§63.10(e)(4)	Reporting COMS Data	Must submit COMS data with performance test data	NA.	NA.
§63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for EPA Administrator to waive	Yes.	Yes.
§63.11	Control Device and Work Practice Requirements	Requirements for flares and alternative work practice for equipment leaks	NA.	NA.
§63.12	State Authority and Delegations	State authority to enforce standards	Yes.	Yes.
§63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.	Yes.
§63.14	Incorporations by Reference	Test methods incorporated by reference	Yes.	Yes.

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§63.15	Availability of Information and Confidentiality	Public and confidential information	Yes.	Yes.
§63.16	Performance Track Provisions	Requirements for Performance Track member facilities	Yes.	Yes.

[a] New or reconstructed affected sources that commenced construction or reconstruction after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**] must comply with the requirements in column 5 of this table beginning on [**DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER**] or upon initial startup, whichever is later.

22. Subpart DDDD is amended by adding Appendix B to read as follows:

Appendix B to Subpart DDDD of Part 63 – List of Hazardous Air Pollutants That Must Be Counted Relative to the Plywood and Composite Wood Products "Non-HAP Coating" Definition if Present at 0.1 Percent or More by Mass

Chemical Name	CAS No.
1,1,2,2-Tetrachloroethane	79-34-5
1,1,2-Trichloroethane	79-00-5
1,1-Dimethylhydrazine	57-14-7
1,2-Dibromo-3-chloropropane	96-12-8
1,2-Diphenylhydrazine	122-66-7
1,3-Butadiene	106-99-0
1,3-Dichloropropene	542-75-6
1,4-Dioxane	123-91-1
2,4,6-Trichlorophenol	88-06-2
2,4/2,6-Dinitrotoluene (mixture)	25321-14-6
2,4-Dinitrotoluene	121-14-2
2,4-Toluene diamine	95-80-7
2-Nitropropane	79-46-9
3,3'-Dichlorobenzidine	91-94-1
3,3'-Dimethoxybenzidine	119-90-4
3,3'-Dimethylbenzidine	119-93-7

Chemical Name	CAS No.
4,4'-Methylene bis(2-chloroaniline)	101-14-4
Acetaldehyde	75-07-0
Acrylamide	79-06-1
Acrylonitrile	107-13-1
Allyl chloride	107-05-1
alpha-Hexachlorocyclohexane (a-HCH)	319-84-6
Aniline	62-53-3
Benzene	71-43-2
Benzidine	92-87-5
Benzotrichloride	98-07-7
Benzyl chloride	100-44-7
beta-Hexachlorocyclohexane (b-HCH)	319-85-7
Bis(2-ethylhexyl)phthalate	117-81-7
Bis(chloromethyl)ether	542-88-1
Bromoform	75-25-2
Captan	133-06-2
Carbon tetrachloride	56-23-5
Chlordane	57-74-9
Chlorobenzilate	510-15-6
Chloroform	67-66-3
Chloroprene	126-99-8
Cresols (mixed)	1319-77-3
DDE	3547-04-4
Dichloroethyl ether	111-44-4
Dichlorvos	62-73-7
Epichlorohydrin	106-89-8
Ethyl acrylate	140-88-5
Ethylene dibromide	106-93-4
Ethylene dichloride	107-06-2
Ethylene oxide	75-21-8
Ethylene thiourea	96-45-7
Ethylidene dichloride (1,1-Dichloroethane)	75-34-3
Formaldehyde	50-00-0
Heptachlor	76-44-8
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
Hexachloroethane	67-72-1
Hydrazine	302-01-2
Isophorone	78-59-1
Lindane (hexachlorocyclohexane, all isomers)	58-89-9
m-Cresol	108-39-4
Methylene chloride	75-09-2
Naphthalene	91-20-3
Nitrobenzene	98-95-3
Nitrosodimethylamine	62-75-9

Chemical Name	CAS No.
o-Cresol	95-48-7
o-Toluidine	95-53-4
Parathion	56-38-2
p-Cresol	106-44-5
p-Dichlorobenzene	106-46-7
Pentachloronitrobenzene	82-68-8
Pentachlorophenol	87-86-5
Propoxur	114-26-1
Propylene dichloride	78-87-5
Propylene oxide	75-56-9
Quinoline	91-22-5
Tetrachloroethene	127-18-4
Toxaphene	8001-35-2
Trichloroethylene	79-01-6
Trifluralin	1582-09-8
Vinyl bromide	593-60-2
Vinyl chloride	75-01-4
Vinylidene chloride	75-35-4